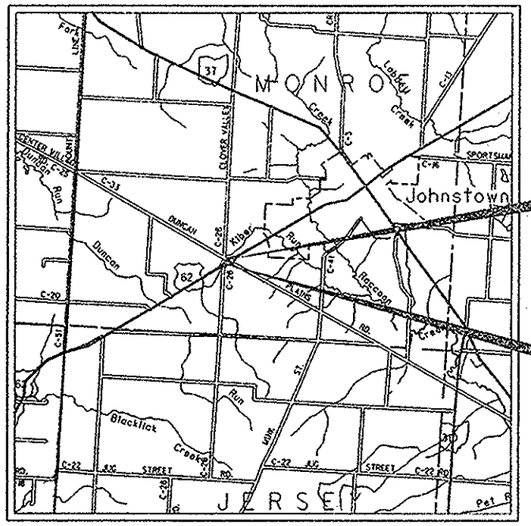


LIC - US-62-2.41
080252 PID - 75711
Dist 5 4/9/2008

LOCATION MAP

LATITUDE: N 40° 08′ 20″ LONGITUDE: W 82° 43′ 10″

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

	U.S. 62	C.R. 33
CURRENT ADT (2008)	10,757	2,559
DESIGN YEAR ADT (2028)	13,125	3,113
DESIGN HOURLY VOLUME (2028)	1,444	249
DIRECTIONAL DISTRIBUTION	56%	54%
TRUCKS (24 HOUR B&C)	6%	5%
DESIGN SPEED	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	RURAL MINOR ARTERIAL	RURAL LOCAL

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NO.
GRADED/CURBED SHOULDER WIDTH	--------	26-33
HORIZONTAL ALIGNMENT	--------	32-33
VERTICAL ALIGNMENT	--------	32-33
STOPPING SIGHT DISTANCE	--------	32-33

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: 1-800-929-0988

PLAN PREPARED BY:

W.E. STILSON
CONSULTING GROUP
355 E. Campus View Blvd. - Suite 250
Columbus, Ohio 43235

1/23/2008 4:21:18 PM
S:\PRODUCTION\PROJECTS\05374.00 ODOT LIC-62-2.41\ROADWAY\SHEETS\US62-GT1.DGN

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LIC-62-2.41

MONROE TOWNSHIP
LICKING COUNTY

INDEX OF SHEETS:

ENGINEERS SEAL:

KEVIN JOSEPH GRATHWOL
E-55282

SIGNED:
DATE: 1/23/08

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	
BP-2.2	7-16-04	CB-1.1	7-15-05	MT-97.10	9-05-06	HL-20.11	1-19-07	TC-21.20	1-19-07	800	1-18-08
BP-3.1	7-16-04	CB-2.2	7-15-05	MT-97.11	9-05-06	HL-30.11	1-21-05	TC-41.20	1-19-01	802	4-15-05
BP-4.1	7-16-04			MT-99.20M	1-30-95	HL-30.21	1-19-07	TC-42.20	7-16-04	816	1-19-07
BP-5.1	7-28-00	HW-2.1	4-21-06	MT-101.60	9-05-06	HL-30.22	1-21-05	TC-52.10	1-19-07	832	4-25-06
		HW-2.2	4-21-06	MT-101.70	10-18-02			TC-52.20	1-19-07	835	4-21-06
GR-1.1	7-16-04							TC-65.10	1-21-05	836	4-15-05
GR-2.1	1-16-04	MH-1.1	7-19-02	MT-105.10	10-18-02			TC-71.10	1-19-07	872	4-21-06
GR-3.4	1-20-06	MH-1.2	1-20-06	MT-105.11	10-18-02			TC-73.10	1-19-01		
GR-4.2	1-19-07			MT-120.00	3-01-00			TC-81.10	5-01-00		
GR-5.3	1-16-04	DM-1.4	4-21-06					TC-82.10	4-19-02	SPECIAL PROVISIONS	
		DM-4.3	7-19-02					TC-83.10	1-19-07		
RM-1.1	4-21-06	DM-4.4	7-19-02					TC-83.20	1-19-07		
RM-4.2	10-20-06							TC-84.20	1-19-07		
		WO-1.2	4-21-06					TC-84.21	1-19-07		
								TC-85.20	5-01-00		

PROJECT DESCRIPTION

IMPROVEMENT OF THE INTERSECTION OF U.S 62 AND DUNCAN PLAINS RD. VIA HORIZONTAL AND VERTICAL REALIGNMENT OF DUNCAN PLAINS RD., THE ADDITION OF LEFT TURN LANES ON U.S. 62 AND DUNCAN PLAINS RD., AND THE INSTALLATION OF A TRAFFIC SIGNAL.

PROJECT EARTH DISTURBED AREA:	4.98 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	5.23 ACRES

2005 SPECIFICATIONS

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

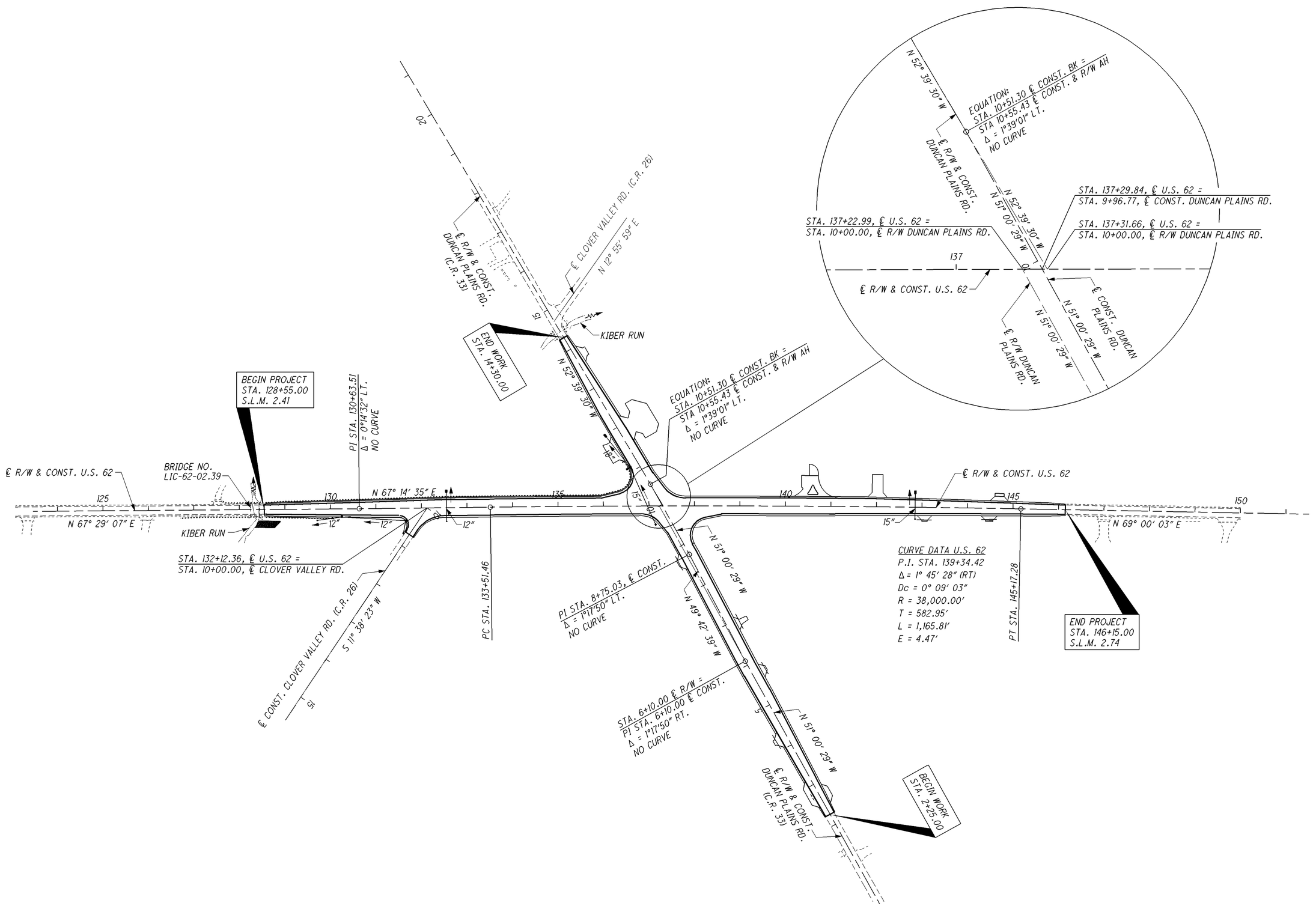
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 11-12, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED Don D. Barber
DATE 1-29-2008 DISTRICT DEPUTY DIRECTOR

APPROVED James G. Beasley Jr
DATE 1-30-08 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E070377
PID NO. 75711
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
LIC-62-2.41



HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED LMO
CHECKED KJG

SCHEMATIC PLAN

LIC-62-2.41

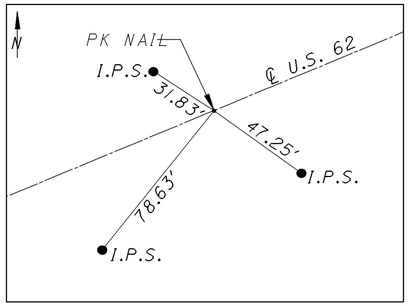
2
84

$TIME$
$DATE$
$FILE$

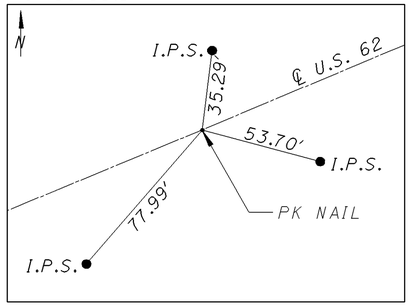
Benchmark #1	Benchmark #2	Benchmark #3	Benchmark #4	Benchmark #5	Benchmark #6	Benchmark #7
5/8" Rebar	5/8" Rebar	5/8" Rebar	5/8" Rebar	5/8" Rebar	5/8" Rebar	5/8" Rebar
14+07.34, 37.42' Rt.	6+09.18, 67.23' Lt.	128+45.92, 16.21' Lt.	133+03.58, 60.99' Rt.	136+51.47, 64.41' Lt.	141+69.42, 56.90' Lt.	149+72.46, 27.88' Lt.
Duncan Plains Road	Duncan Plains Road	U.S. 62	U.S. 62	U.S. 62	U.S. 62	U.S. 62
Elevation = 1111.04	Elevation = 1135.13	Elevation = 1120.26	Elevation = 1125.27	Elevation = 1118.66	Elevation = 1114.17	Elevation = 1111.51

U.S. 62

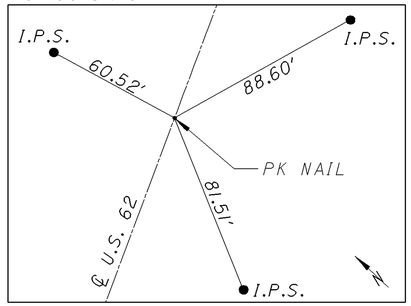
127+00.00



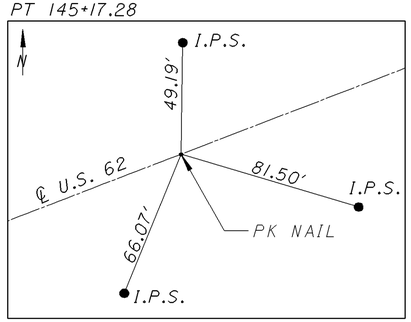
PI 130+63.51



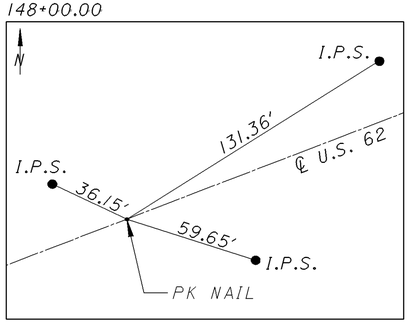
PC 133+51.46



PT 145+17.28

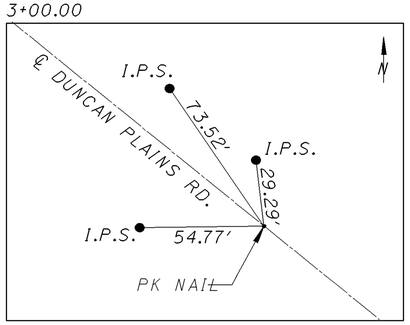


148+00.00

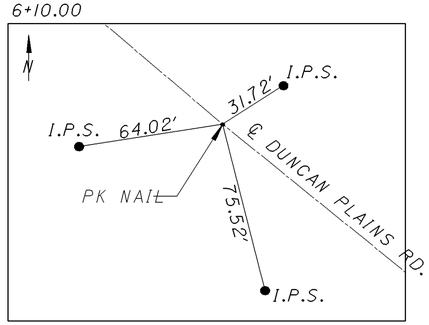


DUNCAN PLAINS RD.

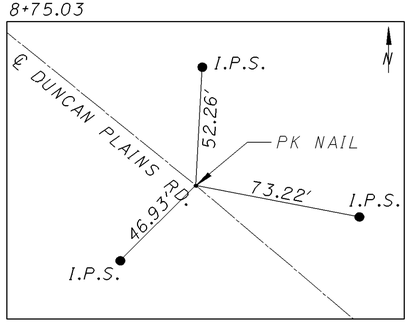
3+00.00



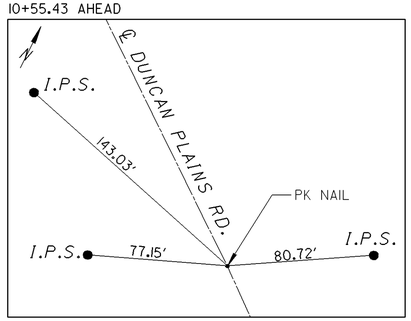
6+10.00



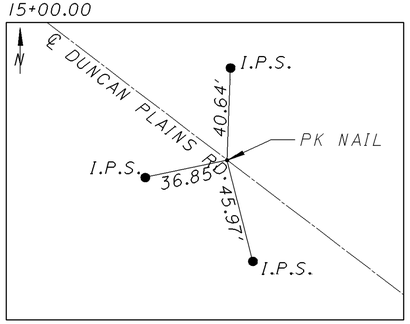
8+75.03



10+55.43 AHEAD



15+00.00

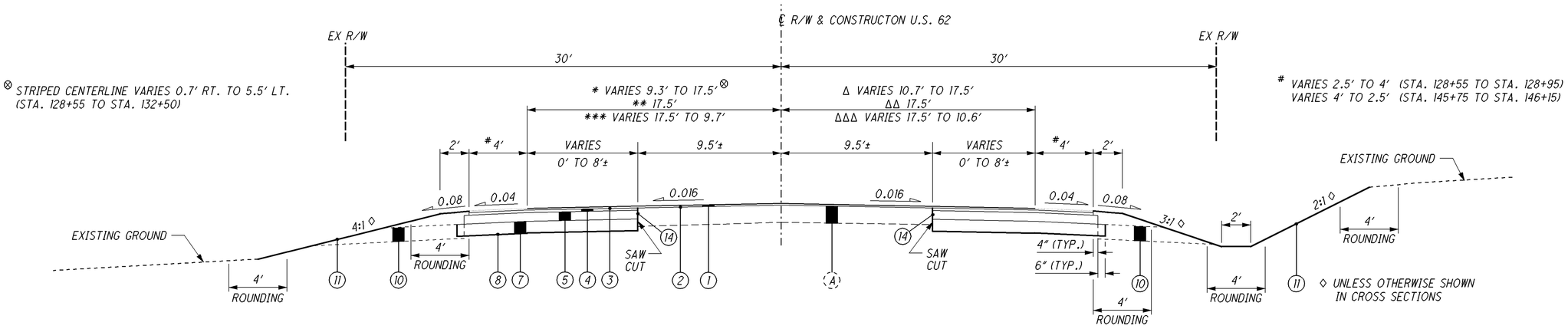


R/W DESIGNER N.L.C.
R/W REVIEWER A.F.M.

CENTERLINE REFERENCE POINTS AND BENCHMARKS

LIC-62-2.41

$DATE$ $TIME$
$FILE$



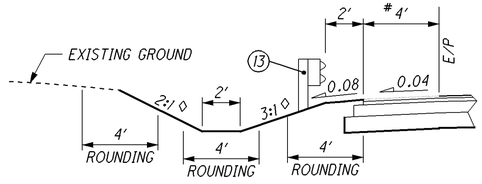
TYPICAL SECTION - U.S. 62

STATION LIMITS LEFT

* STA. 128+55 TO STA. 132+50 = 395.00 FT.
** STA. 132+50 TO STA. 141+85 = 935.00 FT.
*** STA. 141+85 TO STA. 146+15 = 430.00 FT.
TOTAL LENGTH = 1760.00 FT.

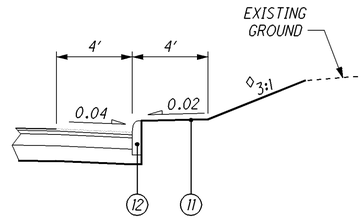
STATION LIMITS RIGHT

Δ STA. 128+55 TO STA. 132+50 = 395.00 FT.
ΔΔ STA. 132+50 TO STA. 140+35 = 785.00 FT.
ΔΔΔ STA. 140+35 TO STA. 146+15 = 580.00 FT.
TOTAL LENGTH = 1760.00 FT.



GUARDRAIL DETAIL

STA. 128+55 TO STA. 135+93.30 LT.
STA. 128+55 TO STA. 130+05 RT.



CURB DETAIL

STA. 130+10 TO STA. 131+68 RT.

LEGEND

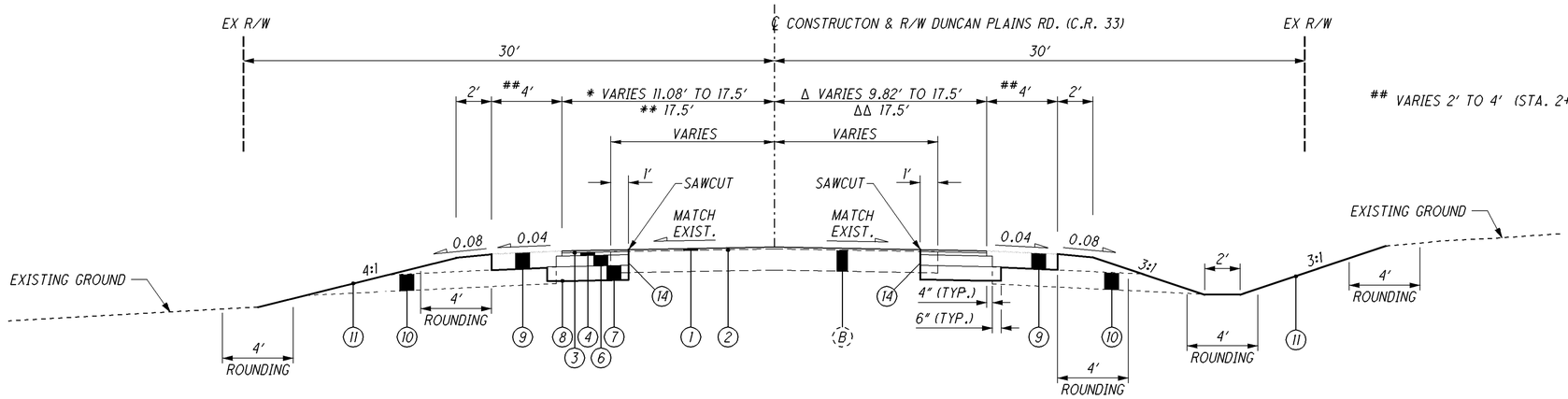
(1) ITEM 448 - 1 1/4″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
(2) ITEM 407 - TACK COAT @ 0.075 GAL/SY
(3) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
(4) ITEM 448 - 1 3/4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
(5) ITEM 301 - 6″ ASPHALT CONCRETE BASE, PG64-22
(6) ITEM 301 - 4″ ASPHALT CONCRETE BASE, PG64-22
(7) ITEM 304 - 6″ AGGREGATE BASE
(8) ITEM 204 - SUBGRADE COMPACTION
(9) ITEM 304 - 8″ AGGREGATE BASE
(10) ITEM 605 - AGGREGATE DRAINS (0.04 MIN. SLOPE, 0.08 DESIRABLE)
(11) ITEM 659 - SEEDING AND MULCHING CLASS 1
(12) ITEM 609 - CURB, TYPE 4-C
(13) ITEM 606 - GUARDRAIL, TYPE 5
(14) ITEM 407 - TACK COAT @ 0.025 GAL/SY
(A) EXISTING ASPHALT CONCRETE PAVEMENT (12″ ASPHALT ON 6″ AGGREGATE)
(B) EXISTING ASPHALT CONCRETE PAVEMENT (4 1/2″ ASPHALT ON 12″ AGGREGATE)

CALCULATED LMO
CHECKED KJG

TYPICAL SECTIONS

LIC-62-2.41

$TIME$
$DATE$
$FILE$



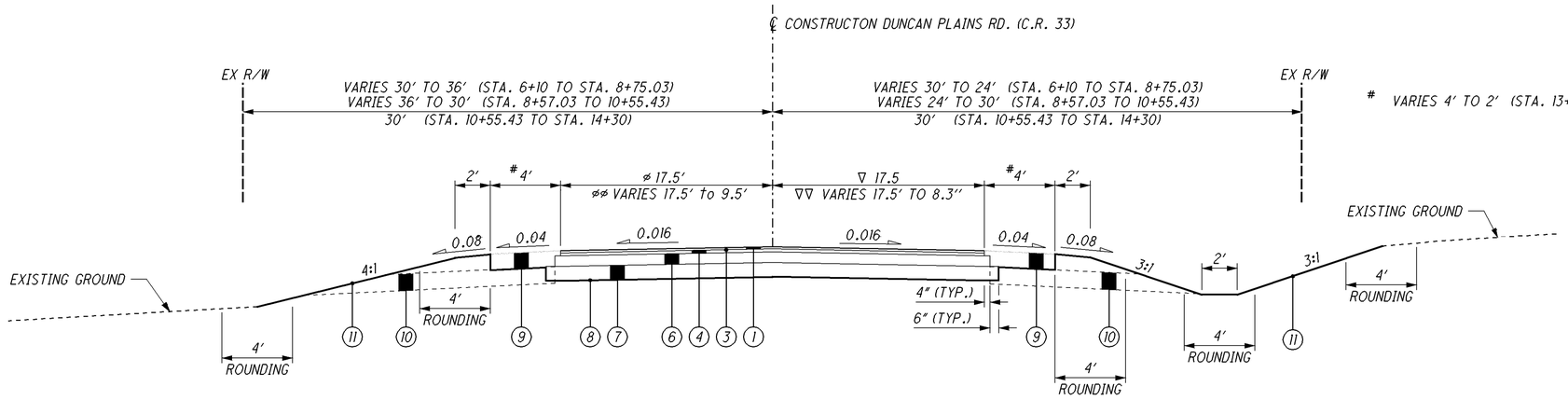
WIDENING SECTION - DUNCAN PLAINS RD. (C.R. 33)

STATION LIMITS LEFT

* STA. 2+25 TO STA. 5+81 = 356.00 FT.
** STA. 5+81 TO STA. 6+10 = 29.00 FT.
TOTAL LENGTH = 385.00 FT.

STATION LIMITS RIGHT

Δ STA. 2+25 TO STA. 5+31 = 306.00 FT.
ΔΔ STA. 5+31 TO STA. 6+10 = 79.00 FT.
TOTAL LENGTH = 385.00 FT.



NORMAL SECTION - DUNCAN PLAINS RD. (C.R. 33)

STATION LIMITS LEFT

⌀ STA. 6+10 TO STA. 9+76.80 = 366.80 FT.
STA. 10+16.74 TO STA. 10+51.30 BK = 34.56 FT.
STA. 10+55.43 AH TO STA. 12+40 = 184.57 FT.
⌀⌀ STA. 12+40 TO STA. 14+30 = 190.00 FT.
TOTAL LENGTH = 775.93 FT.

STATION LIMITS RIGHT

∇ STA. 6+10 TO STA. 9+76.80 = 366.80 FT.
STA. 10+16.74 TO STA. 10+51.30 BK = 34.56 FT.
STA. 10+55.43 AH TO STA. 11+90 = 134.57 FT.
∇∇ STA. 11+90 TO STA. 14+30 = 240.00 FT.
TOTAL LENGTH = 775.93 FT.

LEGEND

(1) ITEM 448 - 1 1/4″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
(2) ITEM 407 - TACK COAT @ 0.075 GAL/SY
(3) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
(4) ITEM 448 - 1 3/4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
(5) ITEM 301 - 6″ ASPHALT CONCRETE BASE, PG64-22
(6) ITEM 301 - 4″ ASPHALT CONCRETE BASE, PG64-22
(7) ITEM 304 - 6″ AGGREGATE BASE
(8) ITEM 204 - SUBGRADE COMPACTION
(9) ITEM 304 - 8″ AGGREGATE BASE
(10) ITEM 605 - AGGREGATE DRAINS (0.04 MIN. SLOPE, 0.08 DESIRABLE)
(11) ITEM 659 - SEEDING AND MULCHING CLASS 1
(12) ITEM 609 - CURB, TYPE 4-C
(13) ITEM 606 - GUARDRAIL, TYPE 5
(14) ITEM 407 - TACK COAT @ 0.025 GAL/SY
(A) EXISTING ASPHALT CONCRETE PAVEMENT (12″ ASPHALT ON 6″ AGGREGATE)
(B) EXISTING ASPHALT CONCRETE PAVEMENT (4 1/2″ ASPHALT ON 12″ AGGREGATE)

CALCULATED LMO
CHECKED KJG

TYPICAL SECTIONS

LIC-62-2.41

$TIME$
$DATE$
$FILE$

CALCULATED LMO CHECKED KJG

GENERAL NOTES

ROUNDING

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

UTILITIES

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

ELECTRIC:
AMERICAN ELECTRIC POWER
CENTRAL OHIO REGION
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
(614) 883-6829
CONTACT: MR. RICK ECKLE

LICKING RURAL ELECTRIFICATION
11339 MT. VERNON ROAD
P.O. BOX 455
UTICA, OHIO 43080-0455
(740) 348-1149
CONTACT: MR. JOHN STRATHMAN

TELEPHONE:
SPRINT
441 WEST BROAD STREET
PATASKALA, OHIO 43062
(740) 927-8282
CONTACT: MS. DEE REED

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

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 8:00 P.M. AND 7:00 A.M.. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAV 1988 DATUM.

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.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

CONVERT THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

CONVERSIONS WILL BE APPROPRIATELY PRECISE AND REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	36	5	41
30"	2	0	2
48"	2	0	2

ITEM 202, RAISED PAVEMENT MARKER REMOVED

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY FOR REMOVAL OF EXISTING RAISED PAVEMENT MARKERS LOCATED WITHIN THE PROJECT AREA.

ITEM 202, RAISED PAVEMENT MARKER REMOVED 30 EACH

INDIANA BAT NOTE

CLEARING OF ANY TREES THAT HAVE SUITABLE SUMMER BROOD REARING OR ROOSTING HABITAT FOR THE FEDERALLY ENDANGERED INDIANA BAT (E.G. TREES WITH EXFOLIATING BARK AND/OR CAVITIES), SHALL OCCUR BEFORE APRIL 15 OR SEPTEMBER 15 WHEN THE BATS WOULD NOT BE USING SUCH HABITAT.

ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING

THE FOLLOWING LOCATIONS HAVE BEEN INDENTIFIED WITH THE LIMITS FOR UNDERCUTS:

UNDERCUTS FOR UNSUITABLE SOILS:

NONE

UNDERCUTS FOR SOFT SOILS:

US-62:
STATION 134+50 TO 138+50 LT. & RT.: 1 FT.
STATION 144+00 TO 146+15 LT. & RT.: 1 FT.

CR-33 (DUNCAN PLAINS RD.):
STATION 6+10 TO 9+76.8: 2 FT.
STATION 10+16.74 TO 10+60: 2 FT.

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE WITHIN 0.2 OF A FOOT OF THE PLAN SUBGRADE ELEVATION.

   IF THERE IS UNSUITABLE MATERIAL IN A SHALLOW FILL LOCATION, THEN REMOVE AND REPLACE THE UNSUITABLE MATERIAL ACCORDING TO STEP 2 PRIOR TO CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

2. REMOVE AND REPLACE THE UNSUITABLE MATERIALS (E.G., A-4b, A-2-5, A-5, A-7-5, COAL, SHALE, ROCK). THESE MATERIALS ARE TO BE REMOVED PRIOR TO PROOF ROLLING. THE LIMITS ARE SHOWN ON THE CROSS SECTIONS AS UNSUITABLE SOILS. THE QUANTITIES FOR THE UNSUITABLE SOILS ARE PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

3. CONSTRUCT AND COMPACT THE SUBGRADE ACCORDING TO 204.03.

4. PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06 TO DETERMINE THE ACTUAL LIMITS OF THE SOFT SOILS AND TO VERIFY THE UNIFORMITY OF THE SUBGRADE COMPACTION. THE APPROXIMATE LIMITS OF THE SOFT SOILS ARE SHOWN ON THE CROSS SECTIONS AS SOFT SOILS.

5. THE ENGINEER WILL IDENTIFY THE ACTUAL LOCATIONS OF THESE SOFT SOILS BASED ON THE PROOF ROLLING RESULTS. AFTER THE SOFT SOIL AREAS HAVE BEEN DETERMINED, THE ENGINEER WILL ADJUST THE PLAN WIDTH AND DEPTH BY UTILIZING TEST PITS ACCORDING TO THE CONSTRUCTION INSPECTION MANUAL. THE QUANTITIES FOR THE SOFT SOILS ARE PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

6. UNDERCUT THE AREAS DETERMINED BY THE ENGINEER AND REPLACE WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. THE UNDERCUTS WILL EXTEND TO 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

7. PROOF ROLL THE UNDERCUT AREAS ACCORDING TO 204.06 TO VERIFY THE UNDERCUT STABILITY.

8. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

QUANTITY CALCULATIONS FOR THE WORK NOTED ABOVE ARE INCLUDED ON SHEET 24.

ITEM 204, PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204, PROOF ROLLING 4 HOUR

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF PIPES UNDER ITEM 603.

THE FOLLOWING QUANTITIES ARE FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF CULVERTS UNDER US-62 AT STA. 132+55, 137+00, AND 142+85.

ITEM 301,	ASPHALT CONCRETE BASE, PG64-22	10 CU. YDS.
ITEM 304,	AGGREGATE BASE	10 CU. YDS.
ITEM 448,	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	3 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES, A 304 THICKNESS OF 6 INCHES, A 448 THICKNESS OF 1¾ INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. SEE STANDARD CONSTRUCTION DRAWING DM-1.4 FOR TRENCH WIDTH FORMULA AND CALCULATION.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

LIC-62-2.41

$TIME$
$DATE$
$F-ILE$

CALCULATED LMO
CHECKED KJG

GENERAL NOTES

CATCH BASINS AND MANHOLES, AS PER PLAN

THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 802 SHALL GOVERN THE CONSTRUCTION AND INSTALLATION OF THE CATCH BASINS AND MANHOLES LISTED BELOW. THE CATCH BASINS AND MANHOLES SHALL BE PRECAST OR CAST IN PLACE CONCRETE. BRICK OR CONCRETE BLOCK WILL NOT BE PERMITTED.

CATCH BASIN, NO. 3A, AS PER PLAN
CATCH BASIN, NO. 2-2B, AS PER PLAN
MANHOLE, NO. 3, AS PER PLAN

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH LEAN GROUT, ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

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

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

UNRECORDED UNTREATED NON-STORMWATER DRAINAGE

FURNISH NO CONTINUANCE FOR ANY UNRECORDED UNTREATED NON-STORMWATER DRAINAGE SUCH AS UNTREATED SEPTIC, UNTREATED WASTEWATER, UNTREATED CURTAIN/GRADIENT DRAINS, AND UNTREATED FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. PLUG ANY UNRECORDED UNTREATED NON-STORMWATER DRAINAGE WITH CLASS C CONCRETE AT THE RIGHT OF WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 OR 203 ITEM.

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603 - 4" CONDUIT, TYPE E,
FOR DRAINAGE CONNECTION 100 FT.

603 - 6" CONDUIT, TYPE E,
FOR DRAINAGE CONNECTION 100 FT.

ITEM 603, 12" (15") CONDUIT, TYPE A, AS PER PLAN

THE FOLLOWING DESCRIPTION IS THE PROPOSED CONDUIT AS LISTED IN THE GENERAL SUMMARY:

12" (15") CONDUIT, TYPE A, 706.02, 707.01 AL., 707.04 (0.5" CORR.), 707.04 (0.5" CORR.) ASPHALT COATED AND PAVED, 707.05 ASPHALT COATED AND PAVED, 707.21 W/ CFP, AS PER PLAN

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606, ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING 5/32S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SSS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18", OR 12" X 18" IF APPLIED TO A RECTANGULAR ET-2000 7/32PLUS9/32 EXTRUDER HEAD.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

SEEDING AND MULCHING

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.

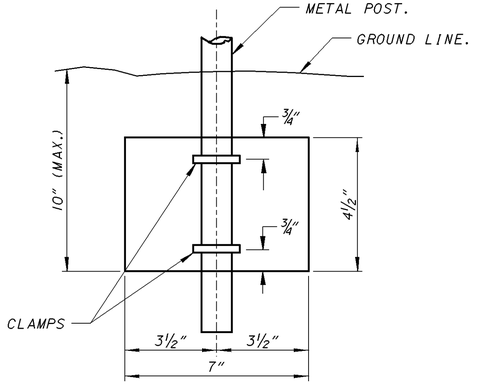
LIC-62-2.41

$TIME$
$DATE$
$FILE$

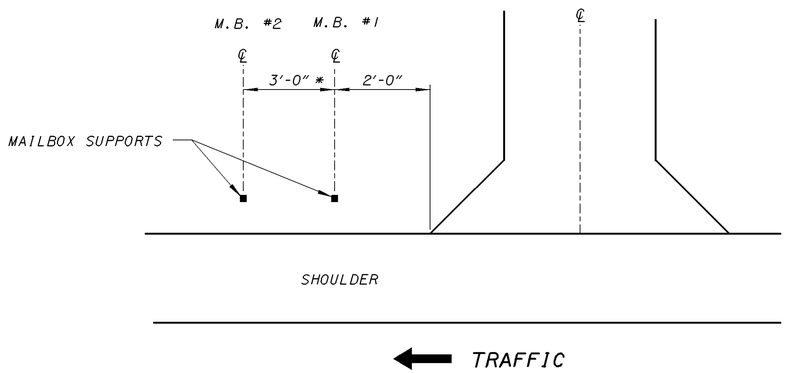
MAILBOX DETAILS

REF. NO.	SHEET NO.	Q DRIVE STATION	SIDE FOR MAILBOX	STP MAILBOX SUPPORT SYSTEM SINGLE	VILLAGE MAILBOX SUPPORT SYSTEM SINGLE	STP MAILBOX SUPPORT SYSTEM DOUBLE	VILLAGE MAILBOX SUPPORT SYSTEM DOUBLE
				EACH	EACH	EACH	EACH
MB1	28	STA. 140+60	RT.			1	
MB2	29	STA. 143+06	RT.	1			
MB3	29	STA. 142+02	RT.	1			
MB4	30	STA. 144+48, STA. 144+70	RT.			1	
MB5	31	STA. 2+70.6, STA. 2+81.7	RT.				1
MB6	32	STA. 5+75	RT.		1		
MB7	32	STA. 8+67.5	RT.	1			
MB8	33	STA. 11+88.2	RT.			1	
		PARTICIPATION SUBTOTALS		3	1	3	1
		TOTALS		4		4	

QUANTITIES CARRIED TO GENERAL SUMMARY.



ANTI-TWIST PLATE



* ADD 3' FOR EACH ADDITIONAL MAILBOX.

ITEM SPECIAL - MAILBOX SUPPORT

DESCRIPTION

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATION SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER. THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING POSTS AND OTHER MATERIAL NOT CONSIDERED SALVAGEABLE AND DISPOSED OF IN ACCORDANCE WITH 202.02.

MATERIALS

WOOD POSTS SHALL BE NOMINAL 4" x 4" SQUARE OR 4½" DIAMETER ROUND, AND CONFORM TO 710.14. THE WOOD PLATE THAT IS ATTACHED TO THE TOP OF THE POST SHALL BE PRESSURE TREATED WOOD.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

SETTING POSTS

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03 AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

MOUNTING BOXES

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

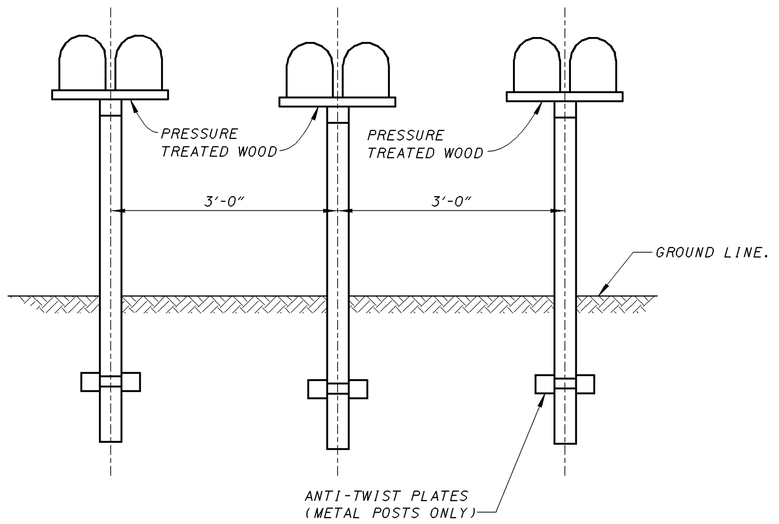
BASIS OF PAYMENT

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

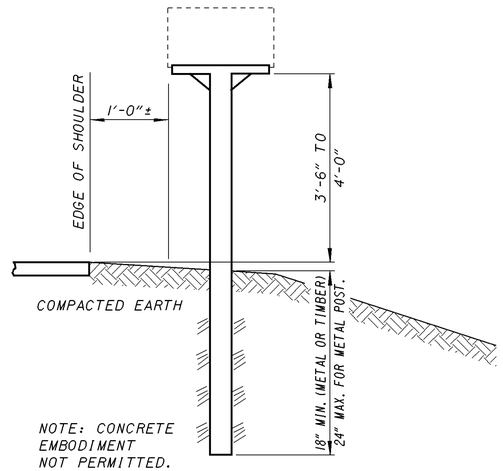
MAILBOX SUPPORTS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR THE TYPE SPECIFIED, COMPLETE IN PLACE.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	MAILBOX SUPPORT SYSTEM, SINGLE
SPECIAL	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE



GROUP MAILBOX INSTALLATION



TYPICAL MAILBOX LOCATION AND MOUNTING HEIGHT

CALCULATED LMO CHECKED KJG

MAILBOX DETAILS

LIC-62-2.41

7A 84

$TIME$
$DATE$ $FILE$

CALCULATED LAM
CHECKED KJG

MAINTENANCE OF TRAFFIC NOTES

LIC-62-2.41

8
84

ITEM 614, MAINTAINING TRAFFIC

ONE LANE OF TRAFFIC IN EACH DIRECTION ON US-62 SHALL BE MAINTAINED AT ALL TIMES. DUNCAN PLAINS TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 11-12 FOR A PERIOD OF 14 CONSECUTIVE CALENDAR DAYS ON THE NORTH APPROACH AND FOR A PERIOD OF 21 CONSECUTIVE CALENDAR DAYS ON THE SOUTH APPROACH. LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH CMS 108.07 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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

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

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

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES. NO LANE RESTRICTIONS SHALL OCCUR ON WEEKDAYS BETWEEN 7:00 AM - 9:00 AM AND 3:00 PM - 6:00 PM.

TRENCH FOR WIDENING

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

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING FOR PAVEMENT FOR MAINTAINING TRAFFIC, IN AREAS UNPROTECTED BY PCB, SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1½ INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

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

ITEM 616, WATER	25 M. GAL

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

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

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

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

GRANVILLE PATROL POST
3855 OUTVILLE RD. SW
GRANVILLE, OH 43023
PHONE: (740) 927-0065
FAX: (740) 587-3182

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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR	50 HOURS

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

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE CENTER LINE, CLASS II

WORK ZONE CENTER LINE, CLASS II SHALL BE APPLIED FOR THE TIME BETWEEN COMPLETION OF THE SURFACE COURSE AND APPLICATION OF THE PERMANENT PAVEMENT MARKINGS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE CENTER LINE, CLASS II	0.67 MILE

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET. ESTIMATED QUANTITIES OF ITEM 614 BARRIER REFLECTOR, TYPE B2 AND ITEM 614 OBJECT MARKER, TWO-WAY HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

$TIME$
$DATE$
$FILE$

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

   THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: 0SCZCVR-T4
DRAWING NAME: QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
REVISION DATE: 5/13/99 REV. J
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-10
DRAWING NAME: QUADGUARD SYSTEM CONCRETE PAD, CZ, OG
REVISION DATE: 11/19/97 REV. D
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-16
DRAWING NAME: QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, OG
REVISION DATE: 7/30/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 354051Z
DRAWING NAME: QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, OG, 24, 30, 36
REVISION DATE: 5/17/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-18
DRAWING NAME: TRANSITION ASSEMBLY, 4 OFFSET, OG
REVISION DATE: 6/25/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35400260
DRAWING NAME: QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
REVISION DATE: 11/19/97 REV. C
ODOT APPROVAL DATE: 8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

   THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: SS450
DRAWING NAME: CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
REVISION DATE: 3/12/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS455
DRAWING NAME: TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 2/18/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS461
DRAWING NAME: TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS462
DRAWING NAME: TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99
ODOT APPROVAL DATE: 8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

   THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIEDIN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: A040416
DRAWING NAME: UNIVERSAL TAU-II PARTS LIST
REVISION DATE: 4/22/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040420
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
REVISION DATE: 4/28/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040105
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
REVISION DATE: 1/07/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: B040239
DRAWING NAME: APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
REVISION DATE: 4/21/04
ODOT APPROVAL DATE: 10/16/04

4. THE GREAT CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC.

   THIS ATTENUATOR MAY BE USED UNTIL JANUARY 1, 2007 IF THE ITEM WAS PURCHASED BEFORE OCTOBER 1, 1998 AND IS IN THE CONTRACTOR'S INVENTORY.

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY ONE TO SIX UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, FIVE INSTALLED UNITS REQUIRE ONE SPARE PARTS PACKAGE AND SEVEN INSTALLED UNITS REQUIRE TWO SPARE PARTS PACKAGES.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (45 MPH) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

ON PROJECTS FOR WHICH THE ACTIVITY IS LIMITED TO ONE SECTION OF THE PROJECT FOR AT LEAST THIRTY DAYS AND THEN IS MOVED TO ANOTHER SECTION OF THE PROJECT UPON COMPLETION OF WORK IN THE FIRST SECTION, THE SPEED LIMIT REDUCTION SHALL BE LIMITED TO ONLY THE ACTIVE PORTION OF THE PROJECT AT THE GIVEN TIME. SIGNING FOR A SPEED LIMIT REDUCTION, AS WELL AS ALL OTHER ADVANCE CONSTRUCTION SIGNING, SHALL BE RELOCATED WHEN THE CONCENTRATION OF ACTIVITY IS RELOCATED.

REDUCED SPEED AHEAD SIGNS SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 1250 FEET ON MULTI-LANE HIGHWAYS AND 500 FEET ON 2-LANE HIGHWAYS.

A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE, TYPICALLY AT THE POINT WHERE ROADWAY AND SHOULDER WIDTHS RETURN TO NORMAL. ON UNDIVIDED ROADWAYS, THE R2-1 (55 MPH) SIGN SHALL BE USED. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN 4 EACH

THE SIGNS WILL BE PLACED AT THE FOLLOWING LOCATIONS:
STA. 123+45
STA. 151+50

SEQUENCE OF CONSTRUCTION

STAGE 1:

- CONSTRUCT CULVERTS UNDER US-62 AT STA. 132+55, 137+00 AND 142+85 WHILE MAINTAINING TRAFFIC WITH FLAGGERS IN ACCORDANCE WITH SCD MT-97.10.

STAGE 1A:

- CLOSE NORTH APPROACH OF CR-33 (DUNCAN PLAINS ROAD) AND DETOUR TRAFFIC. CLOSURE OF NORTH APPROACH SHALL BE LIMITED TO 14 CONSECUTIVE CALENDAR DAYS.
- CONSTRUCT CR-33 PAVEMENT THROUGH THE INTERMEDIATE COURSE, DRIVEWAYS, DRAINAGE AND MISC. SIGNAL ITEMS ALONG THE NORTH APPROACH OF CR-33. ACCESS TO ABUTTING PROPERTIES LOCATED WITHIN THE WORK LIMITS SHALL BE MAINTAINED AT ALL TIMES.
- OPEN NORTH APPROACH OF CR-33 (DUNCAN PLAINS ROAD) TO THROUGH TRAFFIC.

STAGE 1B:

- CLOSE SOUTH APPROACH OF CR-33 (DUNCAN PLAINS ROAD) AND DETOUR TRAFFIC. CLOSURE SHALL BE LIMITED TO 21 CONSECUTIVE CALENDAR DAYS.
- CONSTRUCT CR-33 PAVEMENT THROUGH THE INTERMEDIATE COURSE, DRIVEWAYS, DRAINAGE AND MISC. SIGNAL ITEMS ALONG THE SOUTH APPROACH OF CR-33. ACCESS TO ABUTTING PROPERTIES LOCATED WITHIN THE WORK LIMITS SHALL BE MAINTAINED AT ALL TIMES.
- OPEN SOUTH APPROACH OF CR-33 (DUNCAN PLAINS ROAD) TO THROUGH TRAFFIC.

STAGE 2:

- CONSTRUCT STAGE 2 PAVEMENT ALONG THE SOUTH SIDE OF US-62 WHILE MAINTAINING TRAFFIC WITH FLAGGERS IN ACCORDANCE WITH SCD MT-97.11.
- INSTALL STAGE 2 WORK ZONE PAVEMENT MARKINGS, SIGNING AND SHIFT US-62 TRAFFIC AS SHOWN IN THE PLANS.
- CONSTRUCT US-62 PAVEMENT WIDENING (AS PER DROP OFF POLICY) THROUGH THE INTERMEDIATE COURSE, GUARDRAIL, DRIVEWAYS, DRAINAGE AND MISC. SIGNAL ITEMS ALONG THE NORTH SIDE OF US-62. ACCESS TO ABUTTING PROPERTIES LOCATED WITHIN THE WORK LIMITS SHALL BE MAINTAINED AT ALL TIMES.

STAGE 2A:

-CONSTRUCT PAVEMENT WIDENING (AS PER DROP OFF POLICY), ALONG THE NORTH SIDE OF US-62 AT THE EAST AND WEST ENDS OF THE PROJECT WHILE MAINTAINING TRAFFIC WITH FLAGGERS IN ACCORDANCE WITH SCD MT-97.10. PAVEMENT WIDENING SHALL BE COMPLETED THROUGH THE INTERMEDIATE COURSE BY THE END OF THE WORK DAY.

STAGE 3:

- INSTALL STAGE 3 WORK ZONE PAVEMENT MARKINGS, SIGNING AND SHIFT US-62 ONTO THE NEWLY WIDENED PAVEMENT ALONG THE NORTH SIDE OF US-62, AS SHOWN IN THE PLANS.
- CONSTRUCT US-62 PAVEMENT WIDENING (AS PER DROP OFF POLICY) THROUGH THE INTERMEDIATE COURSE, GUARDRAIL, DRIVEWAYS, DRAINAGE AND MISC. SIGNAL ITEMS ALONG THE SOUTH SIDE OF US-62. ACCESS TO ABUTTING PROPERTIES LOCATED WITHIN THE WORK LIMITS SHALL BE MAINTAINED AT ALL TIMES.

STAGE 3A:

- CONSTRUCT INTERSECTION OF CLOVER VALLEY RD. THROUGH THE INTERMEDIATE COURSE VIA PART-WIDTH CONSTRUCTION WHILE MAINTAINING TRAFFIC WITH FLAGGERS. INTERSECTION SHALL BE RE-OPENED TO FULL WIDTH AT THE END OF THE WORK DAY.

STAGE 3B:

-CONSTRUCT PAVEMENT WIDENING (AS PER DROP OFF POLICY) ALONG US-62 AT THE EAST AND WEST ENDS OF THE PROJECT WHILE MAINTAINING TRAFFIC WITH FLAGGERS IN ACCORDANCE WITH SCD MT-97.10. PAVEMENT WIDENING SHALL BE COMPLETED THROUGH THE INTERMEDIATE COURSE BY THE END OF THE WORK DAY.

STAGE 4:

- COMPLETE INSTALLATION OF TRAFFIC SIGNAL ITEMS, INCLUDING LOOP DETECTORS (PLACED IN THE INTERMEDIATE COURSE).
- PLACE FINAL SURFACE COURSE, PAVEMENT MARKINGS AND SIGNING OVER ENTIRE PROJECT.
- COMPLETE FINAL GRADING AND SEEDING OPERATIONS.
- ACTIVATE TRAFFIC SIGNAL.

CALCULATED LAM CHECKED KJG

MAINTENANCE OF TRAFFIC NOTES

LIC-62-2.41

9A
84

$TIME$
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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 L&D Manual Volume One, Section 500. 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):

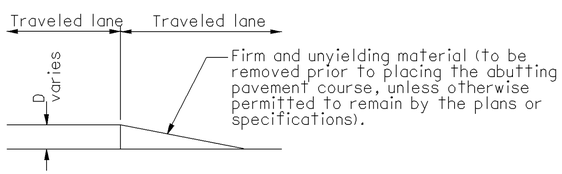
    a. Lengths greater than 60 feet [18 m] - utilize appropriate treatment from Condition I.

    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.



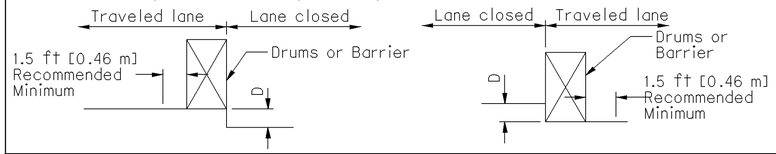
CONDITION I

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.



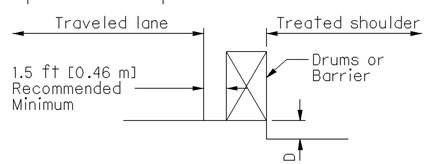
CONDITION II

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.

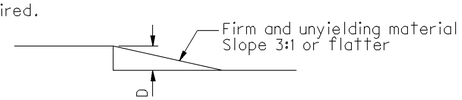
* Minimum lane widths shall be 10 ft [3.0 m] unless otherwise specified in the plans.



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.



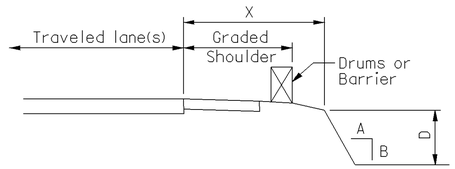
CONDITION III

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

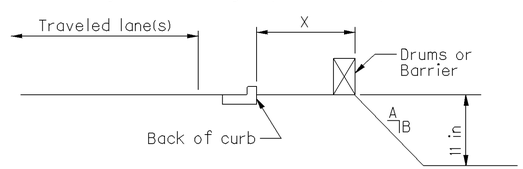
USE FOR: 1. Uncurbed Facilities
2. Curbed Facilities, where:
   a. Curbs are less than 6 inch [150] in height
   b. Curbs are 6 inch [150] or greater in height and the legal speed is greater than 40 mph [70 km/hr].



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

PIS NUMBER 2010190

PLAN INSERT SHEET

DROP OFFS IN WORK ZONES

LIC-62-2.41

1 / 1

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REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE				STP 614 WORK ZONE CENTER LINE, CLASS 1 MILE	VILLAGE 614 WORK ZONE CENTER LINE, CLASS 1 MILE	STP 614 WORK ZONE EDGE LINE, CLASS 1 MILE	VILLAGE 614 WORK ZONE EDGE LINE, CLASS 1 MILE	STP 614 WORK ZONE STOP LINE, CLASS 1 FT.										
STAGE I																						
	12-13	2+25	14+30	LT./RT.				0.16	0.07	0.32	0.14	41										
	13	125+95	139+00	LT./RT.				0.25		0.50												
	14	139+00	149+00	LT./RT.				0.19		0.38												
	15	127+35	139+00	LT./RT.				0.22		0.44		70										
	16	139+00	147+60	LT./RT.				0.17		0.33												
				PARTICIPATION SUBTOTALS				0.99	0.07	1.97	0.14											
				TOTALS CARRIED TO GENERAL SUMMARY				**1.06**		**2.11**		**111**										

CALCULATED LMO
CHECKED KJG

MAINTENANCE OF TRAFFIC SUBSUMMARY

LIC-62-2.41

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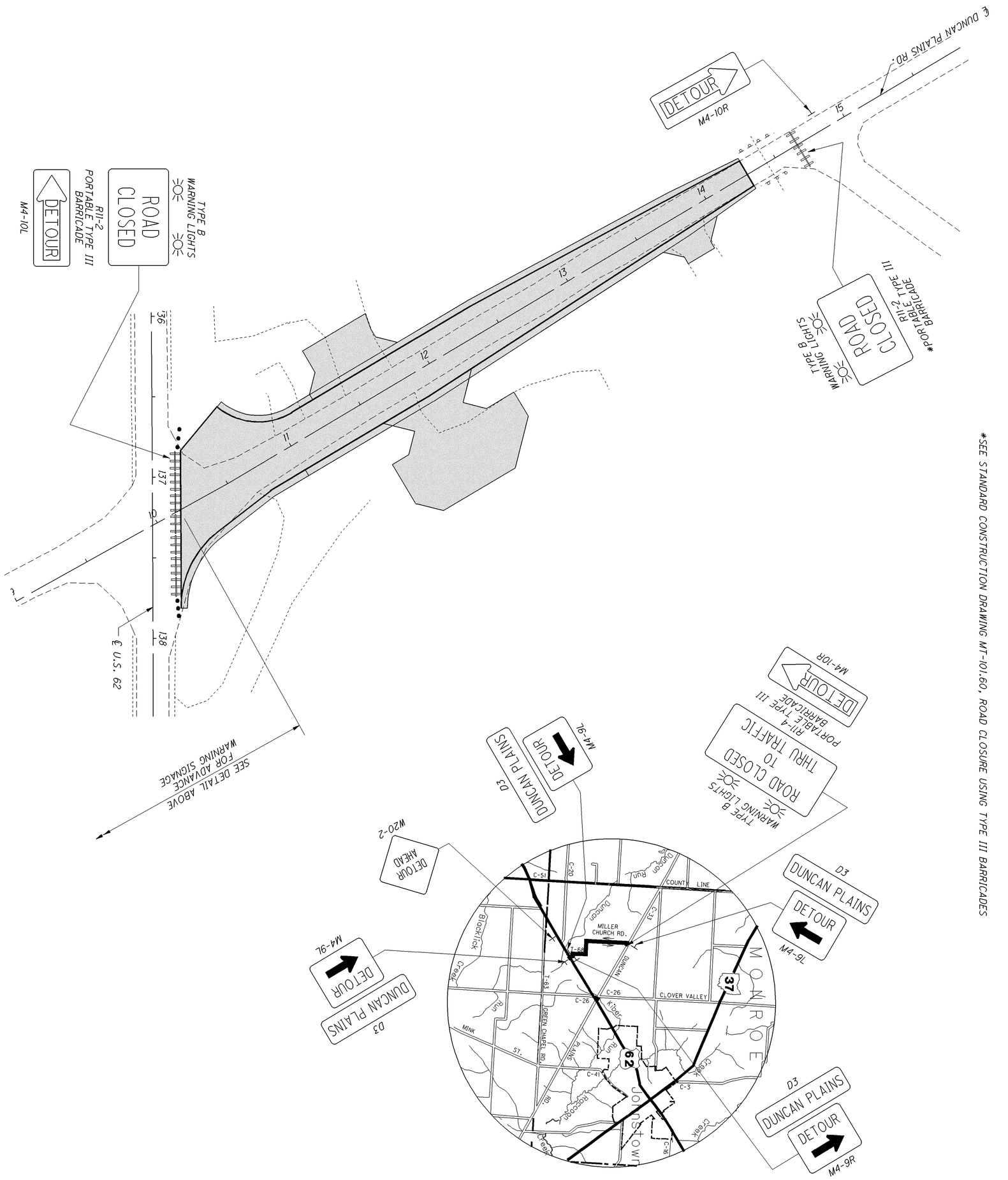
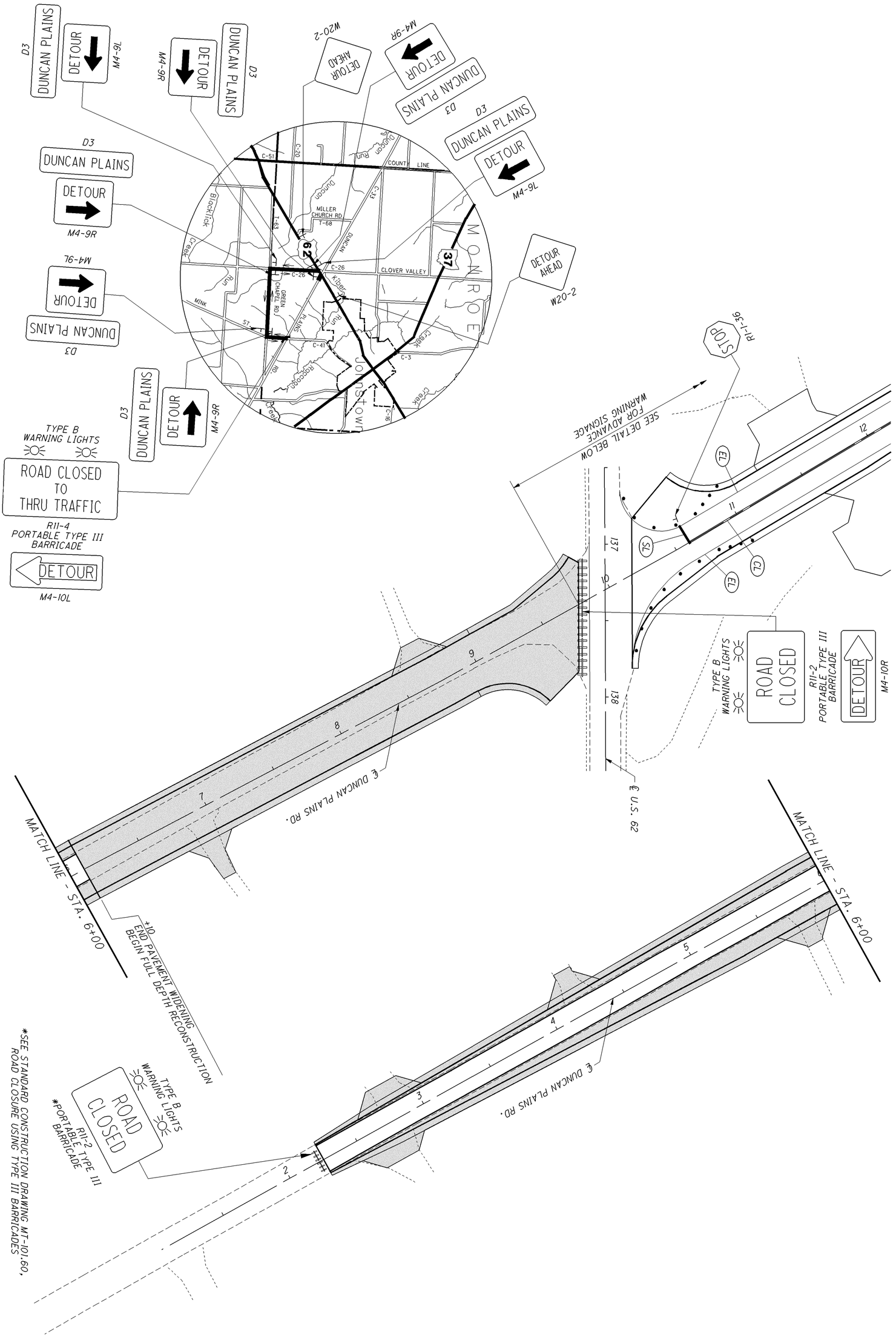


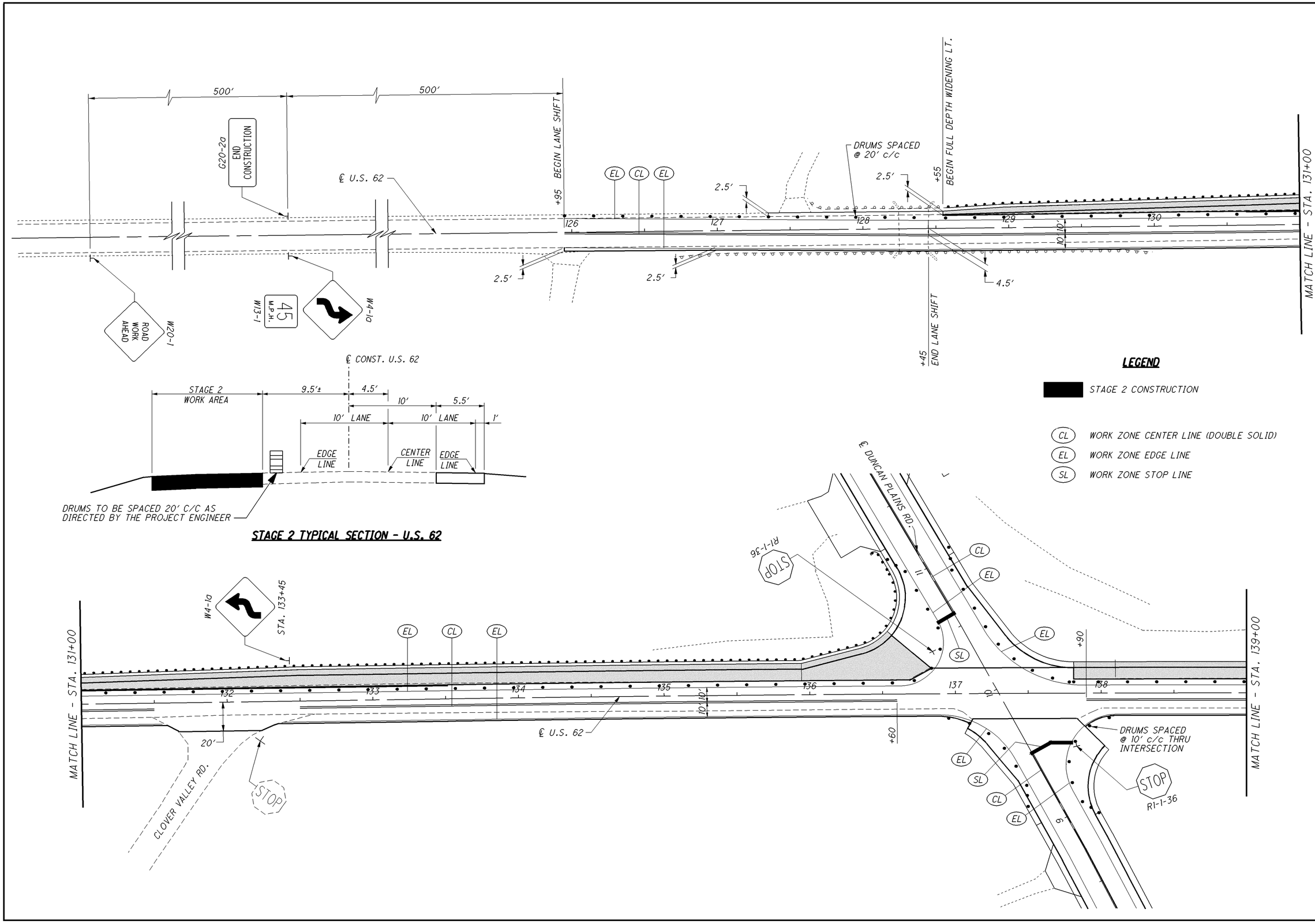
*SEE STANDARD CONSTRUCTION DRAWING MT-101.60, ROAD CLOSURE USING TYPE III BARRICADES

11 / 84	LIC-62-2.41	MAINTENANCE OF TRAFFIC PLAN STAGE 1A	CALCULATED LAM CHECKED KJG	0 15 30 60 HORIZONTAL SCALE IN FEET

$DATE$
$FILE$ $TIME$



12/84	LIC-62-2.41	MAINTENANCE OF TRAFFIC PLAN STAGE 1B	CALCULATED LAM CHECKED KJG	0 30 15 60 HORIZONTAL SCALE IN FEET



MAINTENANCE OF TRAFFIC PLAN STAGE 2

LIC-62-2.41

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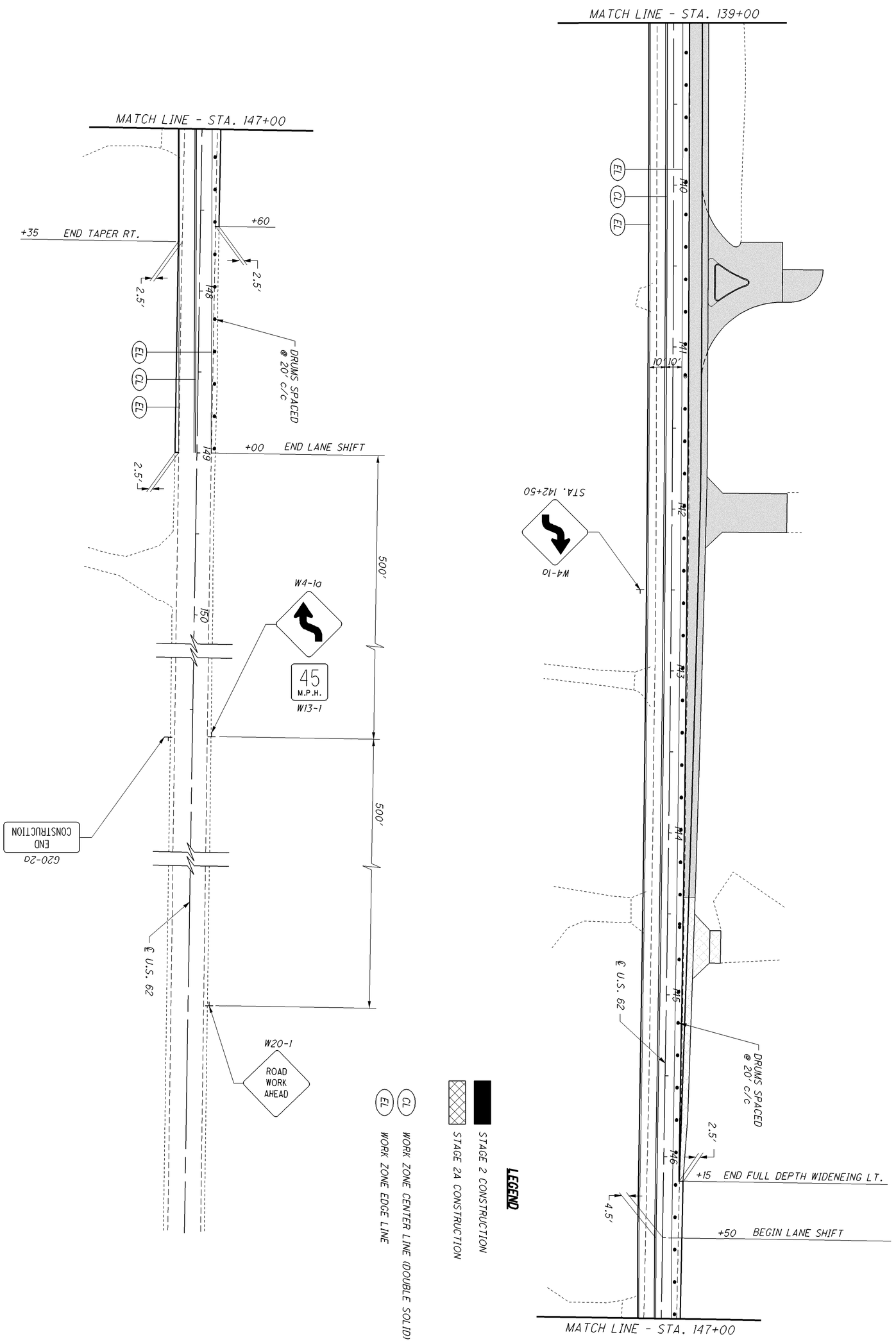
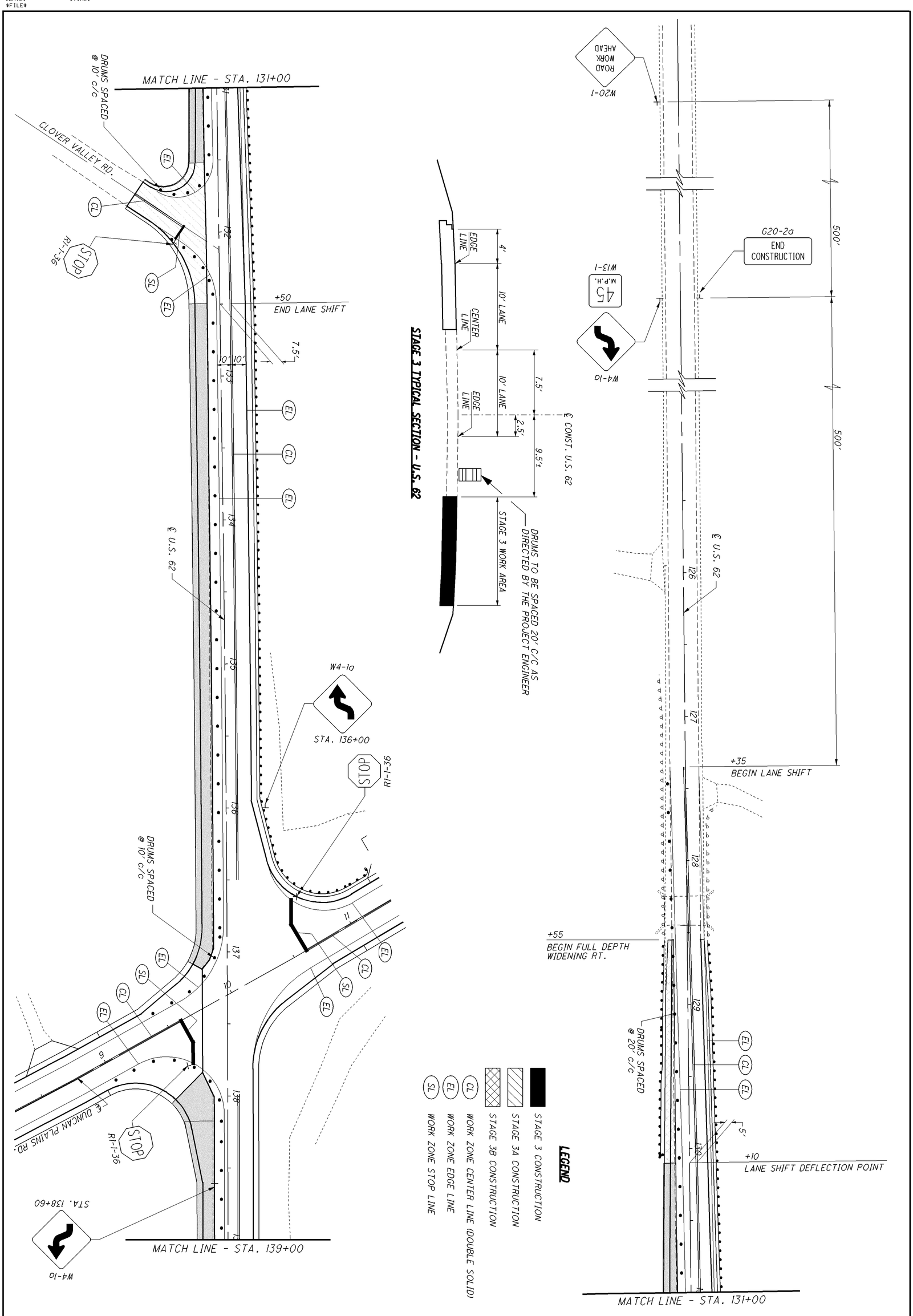
$FILE$ $TIME$



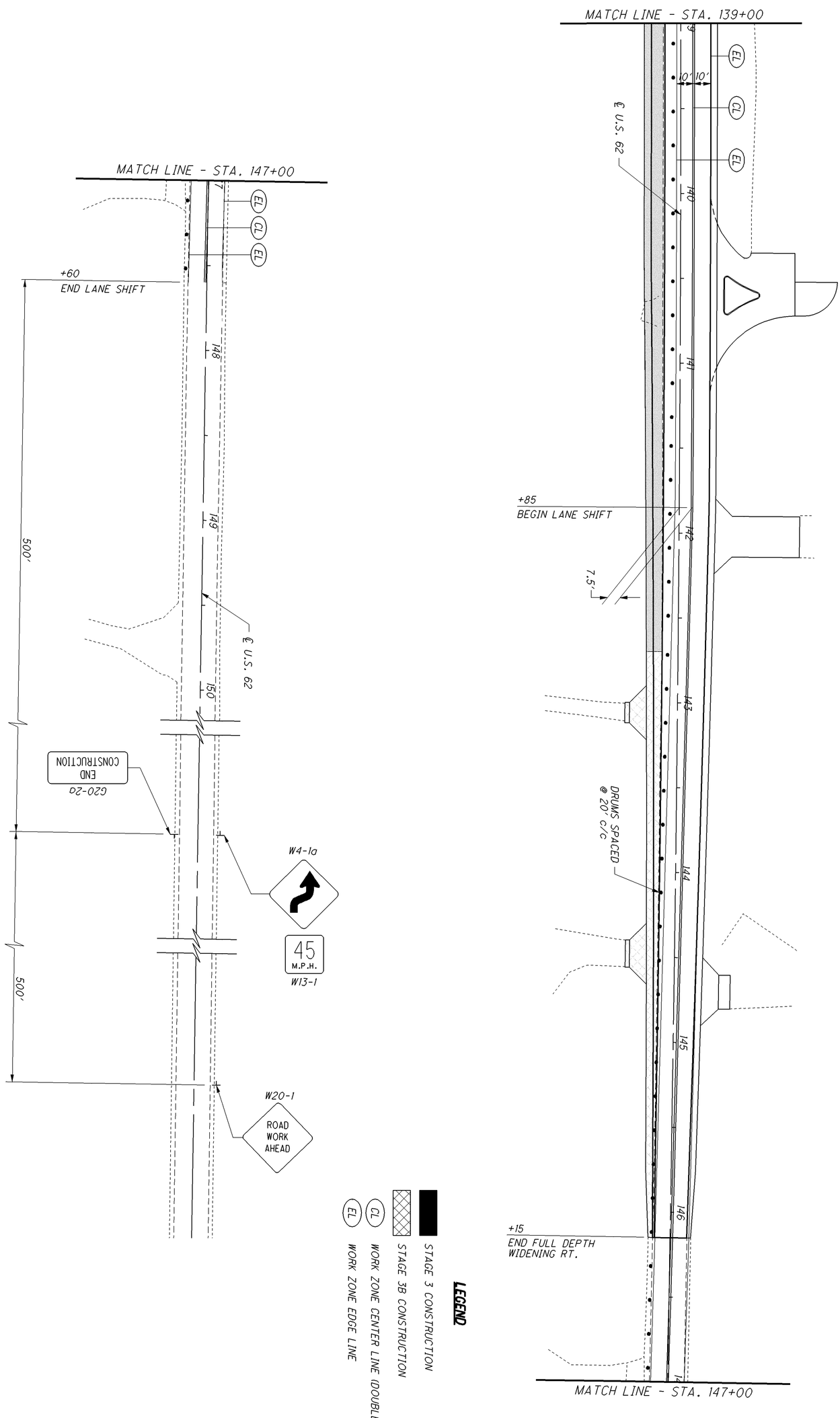
14 / 84	LIC-62-2.41	MAINTENANCE OF TRAFFIC PLAN STAGE 2 (CONT.)	CALCULATED LAM / CHECKED KJG	0 10 20 30 60 HORIZONTAL SCALE IN FEET

$DATE$
$FILE$ $TIME$



15 / 84	LIC-62-2.41	MAINTENANCE OF TRAFFIC PLAN STAGE 3	CALCULATED LAM CHECKED KJG	0 10 20 30 60 HORIZONTAL SCALE IN FEET

$DATE$
$FILE$ $TIME$



16/84	LIC-62-2.41	MAINTENANCE OF TRAFFIC PLAN STAGE 3 (CONT.)	CALCULATED LAM CHECKED KJG	0 10 20 30 60 HORIZONTAL SCALE IN FEET

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7A		20	21	23	24		48	57	75	OFFICE CALCS.	STP	100% COUNTY						
																		ROADWAY	
LUMP												LUMP		201	11000	LUMP		CLEARING AND GRUBBING	
			1									1		202	20010	1	EACH	HEADWALL REMOVED	
					35								35	202	23000	35	SQ. YD.	PAVEMENT REMOVED	
			1977									1977		202	23010	1977	SQ. YD.	PAVEMENT REMOVED, ASPHALT	
			579									419	160	202	35100	579	FT.	PIPE REMOVED, 24" AND UNDER	
			286									286		202	38000	286	FT.	GUARDRAIL REMOVED	
30												30		202	54000	30	EACH	RAISED PAVEMENT MARKER REMOVED	
			1									1		202	58100	1	EACH	CATCH BASIN REMOVED	
			60									60		SPECIAL	20270000	60	FT.	FILL AND PLUG EXISTING CONDUIT	7
			62									43	19	202	75000	62	FT.	FENCE REMOVED	
			1									1		202	98100	1	EACH	REMOVAL MISC.: PRIVATE SIGN	
			10									9	1	202	98100	10	EACH	REMOVAL MISC.: ROCK	
								2371	1434			3371	434	203	10000	3805	CU. YD.	EXCAVATION	
								1277	1676			2869	84	203	20000	2953	CU. YD.	EMBANKMENT	
					1072						8794	8425	1441	204	10000	9866	SQ. YD.	SUBGRADE COMPACTION	
						1565						1565		204	13000	1565	CU. YD.	EXCAVATION OF SUBGRADE	
						1608						1608		204	30020	1608	CU. YD.	GRANULAR MATERIAL, TYPE C	
4												3	1	204	45000	4	HOUR	PROOF ROLLING	
						3016						3016		204	50000	3016	SQ. YD.	GEOTEXTILE FABRIC	
										16		16		604	40500	16	EACH	REFERENCE MONUMENT	
			787.50									787.50		606	13000	787.50	FT.	GUARDRAIL, TYPE 5	
			2									2		606	22010	2	EACH	ANCHOR ASSEMBLY, TYPE E-98	7
			2									2		606	35140	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
	4											3	1	SPECIAL	69050100	4	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	7A
	4											3	1	SPECIAL	69050200	4	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	7A
																		EROSION CONTROL	
			4									4		601	32200	4	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			26									26		601	32300	26	CU. YD.	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	
						1280						1108	172	659	00300	1280	CU. YD.	TOPSOIL	
								7119	4397			9965	1551	659	00500	11,516	SQ. YD.	SEEDING AND MULCHING, CLASS I	
						577						499	78	659	14000	577	SQ. YD.	REPAIR SEEDING AND MULCHING	
						577						499	78	659	15000	577	SQ. YD.	INTER-SEEDING	
						1.61						1.39	0.22	659	20000	1.61	TON	COMMERCIAL FERTILIZER	
						2.38						2.06	0.32	659	31000	2.38	ACRE	LIME	
						66						57	9	659	35000	66	M. GAL.	WATER	
				784								784		670	00710	184	SQ. YD.	DITCH EROSION PROTECTION MAT, TYPE A	
												LUMP		832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN	
												25000		832	30000	25000	EACH	EROSION CONTROL	

CALCULATED LMO
CHECKED KJG

GENERAL SUMMARY

LIC-62-2.41

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7		20	21	22	23		70	70A	71	OFFICE CALCS.	STP	100% COUNTY						
																		DRAINAGE	
					1.5							1.5		602	20000	1.5	CU. YD.	CONCRETE MASONRY	
	100											100		603	00400	100	FT.	4" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	
	100											100		603	01400	100	FT.	6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	
					65							65		603	04201	65	FT.	12" CONDUIT, TYPE A, AS PER PLAN	7
					8							8		603	04400	8	FT.	12" CONDUIT, TYPE B	
					224							224		603	04600	224	FT.	12" CONDUIT, TYPE C	
					33							33		603	04900	33	FT.	12" CONDUIT, TYPE D	
					171							106	65	603	04900	171	FT.	12" CONDUIT, TYPE D, 706.01 OR 706.02	
					57							57		603	05701	57	FT.	15" CONDUIT, TYPE A, AS PER PLAN	7
					138							138		603	05900	138	FT.	15" CONDUIT, TYPE B	
					86							86		603	07400	86	FT.	18" CONDUIT, TYPE B, 706.01 OR 706.02	
					2							2		604	00801	2	EACH	CATCH BASIN, NO. 3A, AS PER PLAN	7
					3							3		604	04501	3	EACH	CATCH BASIN, NO. 2-2B, AS PER PLAN	7
					1							1		604	31501	1	EACH	MANHOLE, NO. 3, AS PER PLAN	7
				722								607	115	605	31100	722	FT.	AGGREGATE DRAINS	
					4							4		835	10020	4	FT.	EXFILTRATION TRENCH, TYPE C	
																		PAVEMENT	
10											1133	1004	139	301	46000	1143	CU. YD.	ASPHALT CONCRETE BASE, PG64-22	
						126						121	5	301	48000	126	CU. YD.	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
10						75					1589	1372	302	304	20000	1674	CU. YD.	AGGREGATE BASE	
											347	285	62	407	10000	347	GAL.	TACK COAT	
											315	266	49	407	14000	315	GAL.	TACK COAT FOR INTERMEDIATE COURSE	
3											383	327	59	448	46050	386	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
											272	272		448	46904	272	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
											159	88	71	448	47020	159	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
						36						34	2	448	48020	36	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
						45							45	452	10000	45	SQ. YD.	6" NON-REINFORCED CONCRETE PAVEMENT	
			183									183		609	24510	183	FT.	CURB, TYPE 4-C	
						71						71		609	26000	71	FT.	CURB, TYPE 6	
						27						27		609	54000	27	SQ. YD.	6" CONCRETE TRAFFIC ISLAND	
																		TRAFFIC CONTROL	
								160				122	38	621	00100	160	EACH	RPM	
										347		273.5	73.5	630	03101	347	FT.	GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN	
										145		115	30	630	80100	145	SQ. FT.	SIGN, FLAT SHEET	
										11		11		630	84900	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
										2		2		630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
									1.33			1.18	0.15	644	00100	1.33	MILE	EDGE LINE	
									0.93			0.74	0.19	644	00300	0.93	MILE	CENTER LINE	
									926			535	391	644	00400	926	FT.	CHANNELIZING LINE	
									124			102	22	644	00500	124	FT.	STOP LINE	
									815			428	387	644	00700	815	FT.	TRANSVERSE / DIAGONAL LINE	
									9			5	4	644	01300	9	EACH	LANE ARROW	
									3			2	1	644	01410	3	EACH	WORD ON PAVEMENT, 96"	

CALCULATED LMO CHECKED KJG

GENERAL SUMMARY

LIC-62-2.41

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	8	9A	10			62	66					STP	100% COUNTY						
																		TRAFFIC SIGNALS	
						280						280		603	00400	280	FT.	4" CONDUIT, TYPE E	
							165					165		625	25400	165	FT.	CONDUIT, 2", 725.04	
							856					856		625	25402	856	FT.	CONDUIT, 2", 725.05	
							113					113		625	25900	113	FT.	CONDUIT, 3", JACKED OR DRILLED UNDER PAVEMENT	
							1127					1127		625	29003	1127	FT.	TRENCH, 24" DEEP, AS PER PLAN	63
							9					9		625	30700	9	EACH	PULL BOX, 725.08, 18"	
							5					5		625	30706	5	EACH	PULL BOX, 725.08, 24"	
							3					3		625	32001	3	EACH	GROUND ROD, AS PER PLAN	63
							3					3		632	05021	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, AS PER PLAN	63
							1					1		632	05101	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 2-WAY, AS PER PLAN	63
							8					8		632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
							12					10	2	632	26500	12	EACH	DETECTOR LOOP	
							114					114		632	30200	114	FT.	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER W/ ACCESSORIES	
							568					568		632	40700	568	FT.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
							2					2		632	64000	2	EACH	STRAIN POLE FOUNDATION	
							3476					3059	417	632	65200	3476	FT.	LOOP DETECTOR LEAD-IN CABLE	
							200					200		632	67200	200	FT.	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
							40					40		632	69800	40	FT.	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
							1					1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	63
							1					1		632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
							2					2		632	83000	2	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10	
							1					1		633	01601	1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN	63
							1					1		633	67000	1	EACH	CABINET RISER	
							1					1		633	67100	1	EACH	CABINET FOUNDATION	
							2					2		633	67200	2	EACH	CONTROLLER WORK PAD	
							1					1		633	75000	1	EACH	UNINTERUPTIBLE POWER SUPPLY (UPS), 1000 WATT	
																		MAINTENANCE OF TRAFFIC	
	100											100		410	12000	100	CU. YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
	50											50		614	11100	50	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	8
			12									12		614	12348	12	EACH	WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)	8-9
												LUMP		614	12420	LUMP		DETOUR SIGNING	11-12
		4										4		614	12470	4	EACH	WORK ZONE SPEED LIMIT SIGN	9A
	10											10		614	13000	10	CU. YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			52									52		614	13302	52	EACH	BARRIER REFLECTOR, TYPE B2	8
			46									46		614	13360	46	EACH	OBJECT MARKER, TWO WAY	8
			1.06									0.99	0.07	614	21000	1.06	MILE	WORK ZONE CENTER LINE, CLASS I	
	0.67											0.60	0.07	614	21400	0.67	MILE	WORK ZONE CENTER LINE, CLASS II	
			2.11									1.97	0.14	614	22000	2.11	MILE	WORK ZONE EDGE LINE, CLASS I	
			111									111		614	26000	111	FT.	WORK ZONE STOP LINE, CLASS I	
												LUMP		615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
			1290									1290		615	25000	1290	SQ. YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
	75											75		616	10000	75	M. GAL.	WATER	
			2180									2180		622	40020	2180	FT.	PORTABLE CONCRETE BARRIER, 32"	
	LUMP											LUMP		614	11000	LUMP		MAINTAINING TRAFFIC	
												5		619	16010	5	MONTH	FIELD OFFICE, TYPE B	
												LUMP		623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
												LUMP		624	10000	LUMP		MOBILIZATION	

CALCULATED LMO CHECKED RJG

GENERAL SUMMARY

LIC-82-2.41

19/84

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LIC-82-2.41 ROADWAY

SHEET NUMBER		PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
69B	69E	STP	100Z COUNTY						
								TRAFFIC SIGNALS (BID ALTERNATE)	
60		60		603	00400	60	FT.	4" CONDUIT, TYPE E	
	133	133		625	25400	133	FT.	CONDUIT, 2", 725.04	
	45	45		625	25500	45	FT.	CONDUIT, 3", 725.04	
	102	102		625	25900	102	FT.	CONDUIT, 3", JACKED OR DRILLED UNDER PAVEMENT	
	113	113		625	29003	113	FT.	TRENCH, 24" DEEP, AS PER PLAN	63
	3	3		625	30706	3	EACH	PULL BOX, 725.08, 24"	
	3	3		625	32001	3	EACH	GROUND ROD, AS PER PLAN	63
	6	6		632	05001	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN	63
	2	2		632	05081	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN	63
	8	8		632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
	652	652		632	40700	652	FT.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	2	2		632	64011	2	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	69B
	200	200		632	67200	200	FT.	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
	40	40		632	69800	40	FT.	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1	1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	63
	1	1		632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
	1	1		632	90400	1	EACH	SIGNALIZATION, MISC.: COMBINATION SIGNAL SUPPORT, 29' HIGH, 15.0' BASE, 49' MAST ARM, 45' MAST ARM, 35' LUMINAIRE BRACKET, BLACK, ASSEMBLY	69A
	1	1		632	90400	1	EACH	SIGNALIZATION, MISC.: COMBINATION SIGNAL SUPPORT, 23' HIGH, 15.0' BASE, 49' MAST ARM, 45' MAST ARM, 35' LUMINAIRE BRACKET, BLACK, ASSEMBLY	69A
	1	1		633	01601	1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN	63
	1	1		633	67000	1	EACH	CABINET RISER	
	1	1		633	67100	1	EACH	CABINET FOUNDATION	
	2	2		633	67200	2	EACH	CONTROLLER WORK PAD	
	1	1		633	75000	1	EACH	UNINTERUPTIBLE POWER SUPPLY (UPS), 1000 WATT	
	LUMP	LUMP		633	99300	LUMP		CONTROLLER ITEM, MISC.: EXTERIOR FINISHING OF CONTROLLER / UPS CABINET	69B
	1	1		816	30001	1	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	69B

CALCULATED LMO
CHECKED KJG

GENERAL SUMMARY (BID ALTERNATE)

LIC-62-2.41

19A
84

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ESTIMATED QUANTITIES

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	STP 202 HEADWALL REMOVED (EACH)	STP 202 PAVEMENT REMOVED, ASPHALT (SQ. YD.)	STP 202 PIPE REMOVED, 24" AND UNDER (FT.)	COUNTY 202 PIPE REMOVED, 24" AND UNDER (FT.)	STP 202 GUARDRAIL REMOVED (FT.)	STP 202 CATCH BASIN REMOVED (EACH)	STP SPECIAL FILL AND PLUG EXISTING CONDUIT (FT.)	STP 202 FENCE REMOVED (FT.)	COUNTY 202 FENCE REMOVED (FT.)	STP 202 REMOVAL MISC.: PRIVATE SIGN (EACH)	STP 202 REMOVAL MISC.: ROCK (EACH)	COUNTY 202 REMOVAL MISC.: ROCK (EACH)	STP 601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (CU. YD.)	STP 601 ROCK CHANNEL PROTECTION, TYPE D WITH FILTER (CU. YD.)	STP 606 GUARDRAIL, TYPE 5 (FT.)	STP 606 ANCHOR ASSEMBLY, TYPE E-98 (EACH)	STP 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 (EACH)		STP 609 CURB, TYPE 4-C (FT.)
C1	27	130+10	131+68	RT.																			183
E1	26	128+34	128+90	RT.														26					
E2	27	132+53	132+57	LT.													1.1						
E3	29	142+83	142+87	LT.													1.3						
E4	33	11+95	12+01	LT.													1.3						
G1	26-28	128+57	135+94.50	LT.															687.5	1	1		
G2	26-27	128+55	130+05	RT.															100	1	1		
R1	26-27	128+57	129+99	LT.					142														
R2	26-27	128+55	129+99	RT.					144														
R3	27	131+59	131+64	RT.								22											
R4	27	134+07	134+07	LT./RT.							31												
R5	27	134+11	134+24	RT.			13																
R6	28	136+82	137+06	LT./RT.	1		51																
R7	28	136+91	137+07	RT.								21											
R8	28	8+95	9+77	LT.			83			1													
R9	28	138+89		LT.										1									
R10	29	140+60	140+77	RT.			17																
R11	29	142+88	142+88	LT.			17																
R12	29	142+88	142+88	LT./RT.							29												
R13	29	142+97	143+18	RT.			20																
R14	29-30	144+33	144+63	RT.			30																
R15	31-32	4+08	5+67	LT.				160															
R16	32	5+65		RT.												1							
R17	32	5+87	6+06	RT.									19										
R18	32	8+53	8+95	LT.			41																
R19	32	6+10	9+76.80	LT./RT.		929																	
R20	33	10+91	11+22	LT.			30																
R21	33	11+31	12+48	LT.			117																
R22	33	11+40	11+44	LT.											2								
R23	33	11+86		RT.											6								
R24	33	11+84		LT.											1								
R25	33	10+16.74	14+30	LT./RT.		1048																	
PARTICIPATION SUBTOTALS							419	160				43	19		9	1	3.7						
TOTALS CARRIED TO GENERAL SUMMARY					1	1977	579		286	1	60	62		1	10		4	26	787.50	2	2		183

CALCULATED LMO
CHECKED KJG

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STATION	SIDE	STP 605 AGGREGATE DRAINS FT.
U.S. 62		
128+75	RT.	7
129+00	LT.	7
129+25	RT.	7
129+50	LT.	7
130+00	LT.	7
130+50	LT.	6
131+00	LT.	6
131+50	LT.	6
132+00	LT.	6
132+25	RT.	7
132+50	LT.	6
132+75	RT.	7
133+00	LT.	7
133+25	RT.	7
133+50	LT.	7
133+75	RT.	6
134+00	LT.	5
134+50	LT.	5
135+00	LT.	5
135+25	RT.	6
135+50	LT.	7
135+75	RT.	6
136+00	LT.	7
136+50	LT.	7
136+75	RT.	6
138+00	LT.	9.5
138+25	RT.	6
138+50	LT.	9.5
138+75	RT.	6
139+00	LT.	9.5
139+25	RT.	6
139+50	LT.	9.5
139+75	RT.	6
140+00	LT.	9.5
140+25	RT.	6
140+50	LT.	9.5
141+00	LT.	9.5
141+25	RT.	7
141+50	LT.	9.5
141+75	RT.	7
142+25	RT.	7
142+50	LT.	9.5
142+75	RT.	6
143+00	LT.	7
143+25	RT.	7
143+50	LT.	7
143+75	RT.	7
144+00	LT.	6
144+25	RT.	7
144+50	LT.	6
145+00	LT.	6
145+50	LT.	7
146+00	LT.	7
U.S. 62 SUBTOTAL		**369.5**

STATION	SIDE	STP 605 AGGREGATE DRAINS FT.	VILLAGE 605 AGGREGATE DRAINS FT.
DUNCAN PLAINS RD.			
2+50	LT.		8.5
3+25	RT.		9
3+50	LT.		9
3+75	RT.		9.5
4+00	LT.		9.5
4+25	RT.		10.5
4+50	LT.		9.5
4+75	RT.		10.5
5+00	LT.		9.5
5+25	RT.		10.5
5+50	LT.		9.5
6+00	LT.		9.5
6+25	RT.	10	
6+50	LT.	9.5	
7+00	LT.	9.5	
7+25	RT.	9	
7+50	LT.	9.5	
7+75	RT.	9	
8+00	LT.	9.5	
8+25	RT.	9	
8+50	LT.	9.5	
8+75	RT.	9	
9+00	LT.	9.5	
9+50	LT.	9.5	
10+25	RT.	12.5	
10+75	RT.	12.5	
11+25	RT.	12.5	
12+00	LT.	10.5	
12+50	LT.	10.5	
12+75	RT.	12.5	
13+00	LT.	10.5	
13+25	RT.	11	
13+50	LT.	10.5	
14+00	LT.	10.5	
14+25	RT.	11.5	
DUNCAN PLAINS SUBTOTALS		**237.5**	**115**
U.S. 62 SUBTOTALS		**369.5**	
PARTICIPATION SUBTOTALS		**607**	**115**
TOTAL CARRIED TO GENERAL SUMMARY		**722**	

STATION FROM	STATION TO	SIDE	LENGTH L FT.	AVERAGE WIDTH W FT.	STP 670 DITCH EROSION PROTECTION MAT, TYPE A SQ. YD.
5+91	6+75	RT.	84	7.5	70
7+12	138+50	RT.	262	7.5	218
6+00	8+51	LT.	251	7.5	209
8+86	9+68	LT.	82	7.5	68
136+50	11+10	LT.	33	7.5	28
12+01	14+30	LT.	229	7.5	191
TOTAL CARRIED TO GENERAL SUMMARY					**784**

CALCULATED LMO
CHECKED KJG

ESTIMATED QUANTITIES

LIC-62-2.41

$TIME$
$DATE$
$FILE$

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	STP 602 CONCRETE MASONRY CU.YD.		STP 603 12" CONDUIT, TYPE A, AS PER PLAN FT.	STP 603 12" CONDUIT, TYPE B FT.	STP 603 12" CONDUIT, TYPE C FT.	STP 603 12" CONDUIT, TYPE D FT.	STP 603 12" CONDUIT, TYPE D, 706.01 OR 706.02 FT.	VILLAGE 603 12" CONDUIT, TYPE D, 706.01 OR 706.02 FT.	STP 603 15" CONDUIT, TYPE A, AS PER PLAN FT.	STP 603 15" CONDUIT, TYPE B FT.	STP 603 18" CONDUIT, TYPE B, 706.01 OR 706.02 FT.		STP 604 CATCH BASIN, NO. 3A, AS PER PLAN EACH	STP 604 CATCH BASIN, NO. 2-2B, AS PER PLAN EACH	STP 604 MANHOLE, NO. 3, AS PER PLAN EACH		STP 835 EXFILTRATION TRENCH, TYPE C FT.	
D1	27	129+70	130+25	RT.	0.21				56								1					
D2	27	130+40		RT.																	4	
D3	27	130+25	131+65.02	RT.					140								1					
D4	27	131+60	131+65.02	RT.					28									1				
D5	27	132+55	132+55	LT./RT.	0.42		65															
D6	28,33	9+68	11+10	LT.										138				1				
D7	29	142+85	142+85	LT./RT.	0.54								57									
D8	29	142+89	143+22	RT.						33												
D9	29-30	144+31	144+65	RT.							34											
D10	31	4+04	4+39	LT.								35										
D11	32	5+61	5+91	RT.								30										
D12	32	6+75	7+12	RT.							37											
D13	32	8+51	8+86	LT.							35											
D14	33	11+10	11+10	LT.				8										1				
D15	33	11+10	11+95	LT.	0.31										86				1			
PARTICIPATION SUBTOTALS					1.48						106	65										
TOTALS CARRIED TO GENERAL SUMMARY					**1.5**		**65**	**8**	**224**	**33**	**171**		**57**	**138**	**86**		**2**	**3**	**1**		**4**	

CALCULATED LMO
CHECKED KJG

DRAINAGE SUBSUMMARY

LIC-62-2.41

$TIME$
$DATE$
$FILE$

CALCULATED LMO
CHECKED KJG

DRIVEWAY SUBSUMMARY

SHEET NO.	STATION	SIDE	DRIVE TYPE	DRIVE COMPOSITION	SHOULDER TYPE	WIDTH	TIE-IN OFFSET	APRON	BEYOND APRON	COUNTY	STP	COUNTY	STP		COUNTY	STP		COUNTY	STP	COUNTY	COUNTY		STP	STP
										202	204	204	301		301	304		304	448	448	452		609	609
										PAVEMENT REMOVED	SUBGRADE COMPACTION	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)		ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	AGGREGATE BASE		AGGREGATE BASE	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	6" NON-REINFORCED CONCRETE PAVEMENT		CURB, TYPE 6	6" CONCRETE TRAFFIC ISLAND
													3-3/4"	4-3/4"	3-3/4"	6"	8"	6"	1-1/4"	1-1/4"				
						FT.	FT.	SQ. FT.	SQ. FT.	SQ. YD.	SQ. YD.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	SQ. YD.		FT.	SQ. YD.
29	140+60	LT.	COMM.	ASPH./GRAV.	PAVED	24	92.5	1889	414		210			27.7			10.2		7.3				71	27
29	142+02	LT.	RES.	ASPHALT	PAVED	24	71	340	955		144		15.0						5.0					
29	143+06	RT.	RES.	GRAVEL	PAVED	12	31	220	33		24		2.5			0.6			0.8					
29, 30	144+48	RT.	RES.	GRAVEL	PAVED	16	29	260	39		29		3.0			0.7			1.0					
30	144+70	LT.	RES.	GRAVEL	PAVED	20	33	300	134		33		3.5			2.5			1.2					
31	2+70.6	RT.	RES.	GRAVEL	AGG.	24	25	355										6.6						
31	2+81.7	LT.	RES.	ASPHALT	AGG.	22	25	465				52			5.4					1.8				
31	4+21	LT.	RES.	CONCRETE	AGG.	12	32	369	40	34.5		45									45.4			
32	5+75	RT.	RES.	GRAVEL	AGG.	12	33	220	17									4.4						
32	6+91.5	RT.	RES.	GRAVEL	AGG.	12	48	219	173							7.3								
32	8+67.5	LT.	RES.	ASPHALT	AGG.	14	31.5	386			43		4.5						1.5					
33	11+44.2	LT.	COMM.	GRAVEL	AGG.	16	47	322	244								14.0							
33	11+65.7	LT.	COMM.	GRAVEL	AGG.	28	47	328	441								19.0							
33	11+88.2	RT.	COMM.	ASPHALT	AGG.	35	83	704	3724		492			64.9					17.1					
33	13+79.5	RT.	COMM.	GRAVEL	AGG.	19	29	300	91								9.7							
COLUMN SUBTOTALS										34.5	975	97	20.5	92.6	5.4	11.1	52.9	11.0	33.9	1.8	45.4			
PARTICIPATION SUBTOTALS										35	975	97	121		5	64		11	34	2	45			
TOTALS CARRIED TO GENERAL SUMMARY										35	1072		126			75			36		45		71	27

LIC-62-2.41

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UNDERCUT CALCULATIONS

STATION	WIDTH	END AREA	STP 204 EXCAVATION OF SUBGRADE	STP 204 GRANULAR MATERIAL, TYPE C	STP 204 GEOTEXTILE FABRIC	DESCRIPTION
	FT.	SQ.FT.	CU.YD.	CU. YD.	SQ. YD.	
U.S. 62						
134+50 BACK	0	0				
134+50 AHEAD	27	27				
			50	50	150	1' UNDERCUT
135+00	27	27				
			50	50	150	1' UNDERCUT
135+50	27	27				
			51	51	153	1' UNDERCUT
136+00	28	28				
			65	65	194	1' UNDERCUT
136+50 BACK	42	42				
136+50 AHEAD	0	0				
138+00 BACK	0	0				
138+00 AHEAD	45	45				
			69	69	206	1' UNDERCUT
138+50 BACK	29	29				
138+50 AHEAD	0	0				
144+00 BACK	0	0				
144+00 AHEAD	18.7	18.7				
			33	33	100	1' UNDERCUT
144+50	17.2	17.2				
			30	30	91	1' UNDERCUT
145+00	15.7	15.7				
			28	28	83	1' UNDERCUT
145+50	14.2	14.2				
			23	23	69	1' UNDERCUT
146+00	10.7	10.7				
			6	6	17	1' UNDERCUT
146+15 BACK	9.3	9.3				
146+15 AHEAD	0	0				
U.S. 62 SUBTOTALS (CARRIED TO RIGHT)			**405**	**405**	**1213**	

UNDERCUT CALCULATIONS

STATION	WIDTH	END AREA	STP 204 EXCAVATION OF SUBGRADE	STP 204 GRANULAR MATERIAL, TYPE C	STP 204 GEOTEXTILE FABRIC	DESCRIPTION
	FT.	SQ.FT.	CU.YD.	CU. YD.	SQ. YD.	
DUNCAN PLAINS RD.						
6+10 BACK	0	0				
6+10 AHEAD	38	76				
			113	113	169	2' UNDERCUT
6+50	38	76				
			141	141	211	2' UNDERCUT
7+00	38	76				
			141	141	211	2' UNDERCUT
7+50	38	76				
			141	141	211	2' UNDERCUT
8+00	38	76				
			141	141	211	2' UNDERCUT
8+50	38	76				
			143	143	214	2' UNDERCUT
9+00	39	78				
			253	253	380	2' UNDERCUT
9+76.80 BACK	50	100				
9+76.80 AHEAD	0	0				
10+16.74 BACK	0	0				
10+16.74 AHEAD	50	70 / 100				
			87	130	196	2' UNDERCUT
10+60 BACK	40	50 / 80				
10+60 AHEAD	0	0				
DUNCAN PLAINS SUBTOTALS			**1160**	**1203**	**1803**	
U.S. 62 SUBTOTALS			**405**	**405**	**1213**	
TOTALS CARRIED TO GENERAL SUMMARY			**1565**	**1608**	**3016**	

EROSION CONTROL CALCULATIONS

ITEM 659 - TOP SOIL

(11,533 S.Y. / 1000) x 111 = 1280 CU. YD.

ITEM 659 - REPAIR SEEDING AND MULCHING

11,533 S.Y. x 0.05 = 577 SQ. YD.

ITEM 659 - INTER-SEEDING

11,533 S.Y. x 0.05 = 577 SQ. YD.

ITEM 659 - COMMERCIAL FERTILIZER

(11,533 S.Y. x 9) x (30/1000) / 2000 = 1.56 TONS
(577 S.Y. x 9) x (20/1000) / 2000 = 0.05 TONS
= 1.61 TONS

ITEM 659 - LIME

(11,533 S.Y. x 9) / 43,560 = 2.38 ACRES

ITEM 659 - WATER

(11,533 S.Y. + 577 S.Y.) x 0.0027 x 2 = 66 M. GAL.

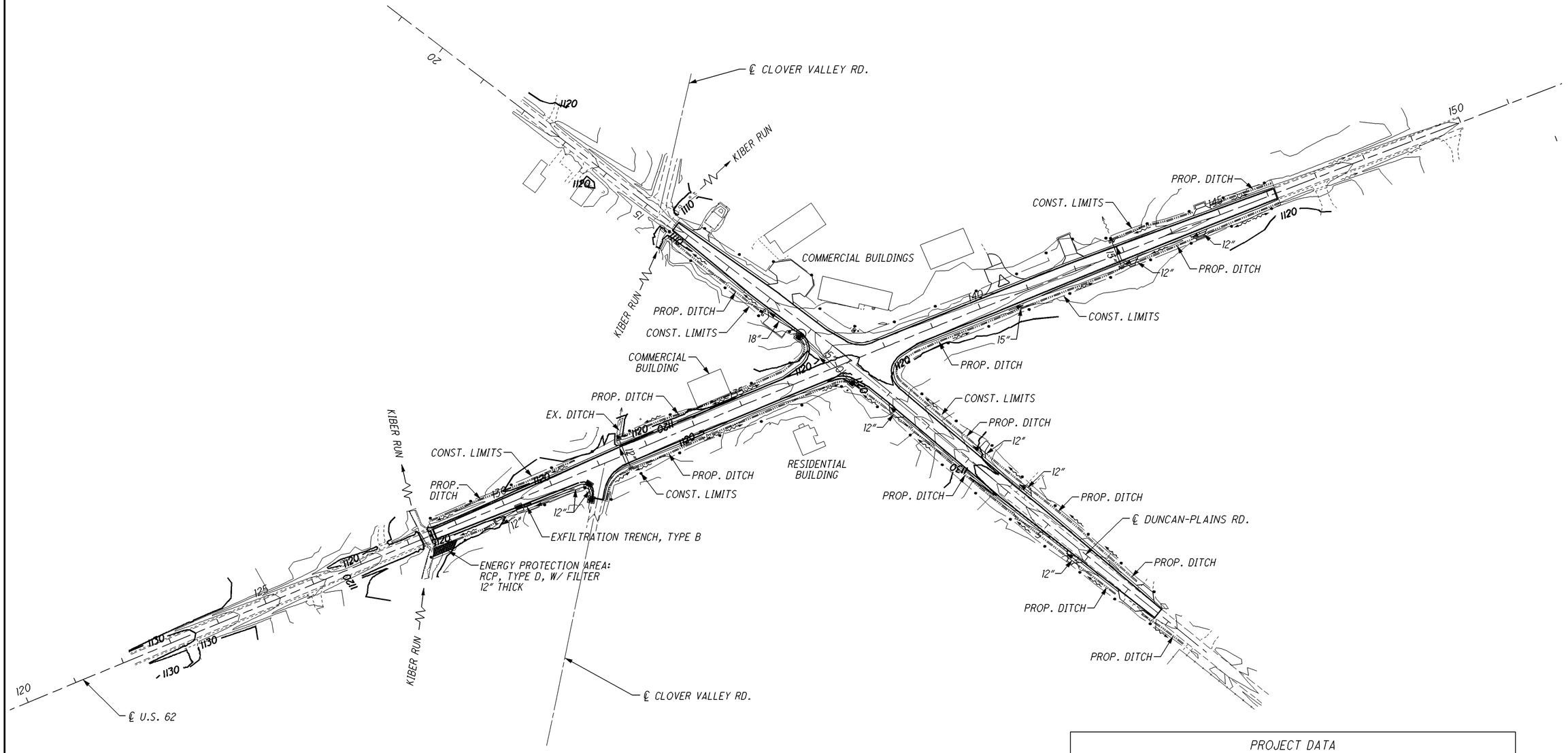
QUANTITIES CARRIED TO GENERAL SUMMARY

CALCULATED LMO
CHECKED KJG

QUANTITY CALCULATIONS

LIC-62-2.41

$TIME$
$DATE$
$FILE$



PROJECT SITE DESCRIPTION
IMPROVEMENT OF THE INTERSECTION OF U.S. 62 AND DUNCAN PLAINS RD. VIA HORIZONTAL AND VERTICAL REALIGNMENT OF DUNCAN PLAINS RD., THE ADDITION OF LEFT TURN LANES ON U.S. 62, AND INSTALLATION OF A TRAFFIC SIGNAL.
USGS QUADRANTS: JOHNSTOWN, OH 40082-B6-TF-024
LATITUDE: N 40° 08′ 20″ LONGITUDE: W 82° 43′ 10″
LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	4.94 ACRES
PROJECT EARTH DISTURBED AREA	4.98 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	5.23 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.66
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.73
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION	1.95 ACRES
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION	2.77 ACRES
IMMEDIATE RECEIVING WATERS	KIBER RUN
SUBSEQUENT RECEIVING WATERS	RACCOON CREEK

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED LMO
CHECKED KJG

PROJECT SITE PLAN

LIC-62-2.41

$TIME$
$DATE$
$FILE$

℄ R/W & CONSTRUCTION U.S. 62

BRIDGE NO. LIC-62-02.39

MARY K. CUTLIP

BEGIN PROJECT STA. 128+55.00

MATCH LINE - STA. 129+50 SEE SHEET NO. 27

15" CHERRY

8" PINE

5" PINE

8" PINE

6" PINE

12" CHERRY

12" CHERRY

12" THORN

15" CHERRY

12" ELM

15" ELM

BRUSH

G1

R1

BRIDGE TERMINAL ASSEMBLY, TYPE 4

CONST. LIMITS

TMP

PROP. DITCH

Ex R/W

2-12" CHERRY

2-12" CHERRY

30'

30'

125

126

127

128

129

N 67° 29' 07" E

15"

12"

2.5'

4'

9.3'

10.7'

BRIDGE TERMINAL ASSEMBLY, TYPE 4

ENERGY PROTECTION AREA: RCP, TYPE D, W/ FILTER, 12" THICK

2-12" THORN

14" THORN

KIBER RUN

2-16"

12" WALNUT

24" WALNUT

PROP. DITCH

CONST. LIMITS

E1

R2

G2

CHURCHES OF CHRIST IN CHRISTIAN UNION

RICHARD D. & ROSALIND L. BROWN

+55 BEGIN PAVEMENT WIDENING
BEGIN TAPER LT. & RT.

+95 END SHOULDER TAPER LT. & RT.

HORIZONTAL SCALE IN FEET

0 10 20 40

CALCULATED LAM

CHECKED KJG

PLAN AND PROFILE - U.S. 62
STA. 124+20 TO STA. 129+50

LIC-62-2.41

26
84

1135
1130
1125
1120
1115
1110
1105
1100

1127.88
1126.72
1125.49
1124.48
1123.46
1122.64
1121.90
1121.23
1120.72
1120.37
1121.07
1120.98
1121.17

EXIST. GRADE

PROFILE GRADE

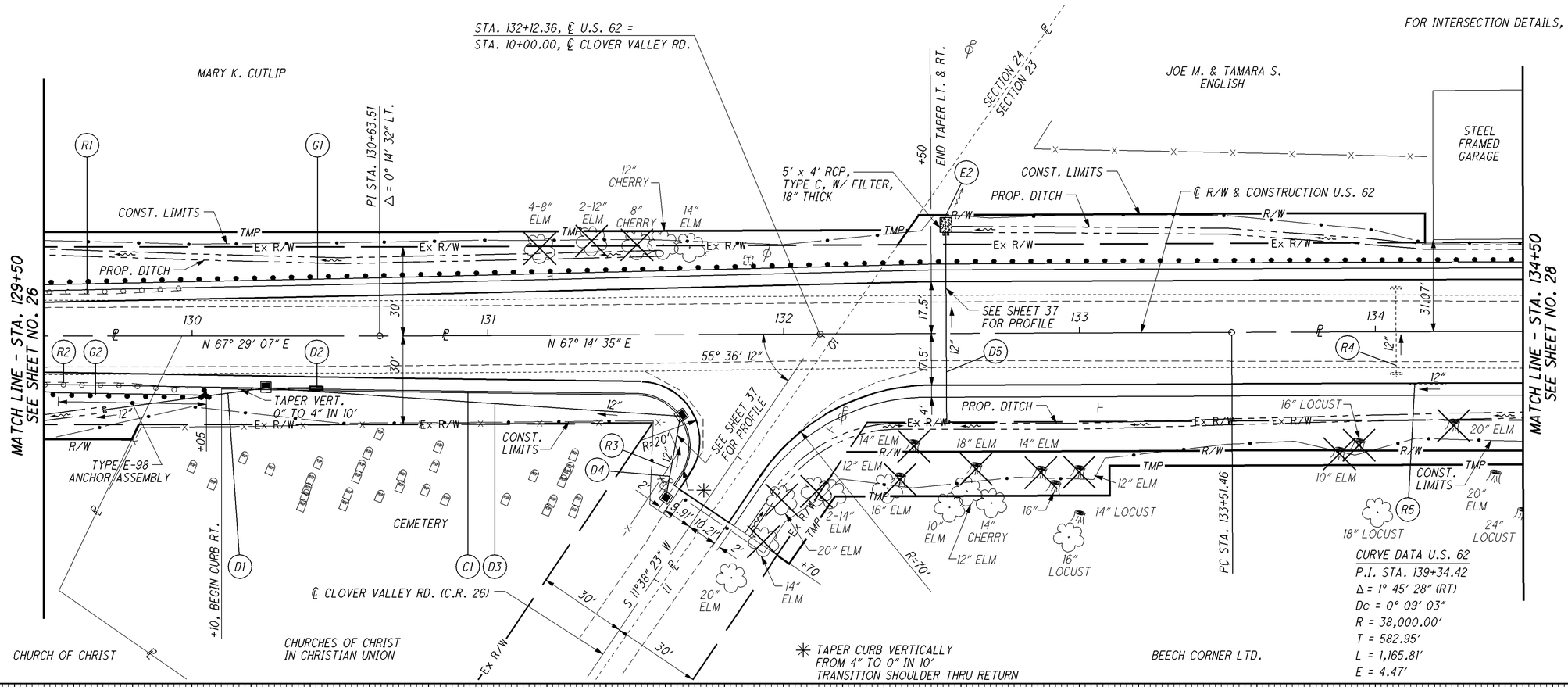
+55 BEGIN PAVEMENT WIDENING

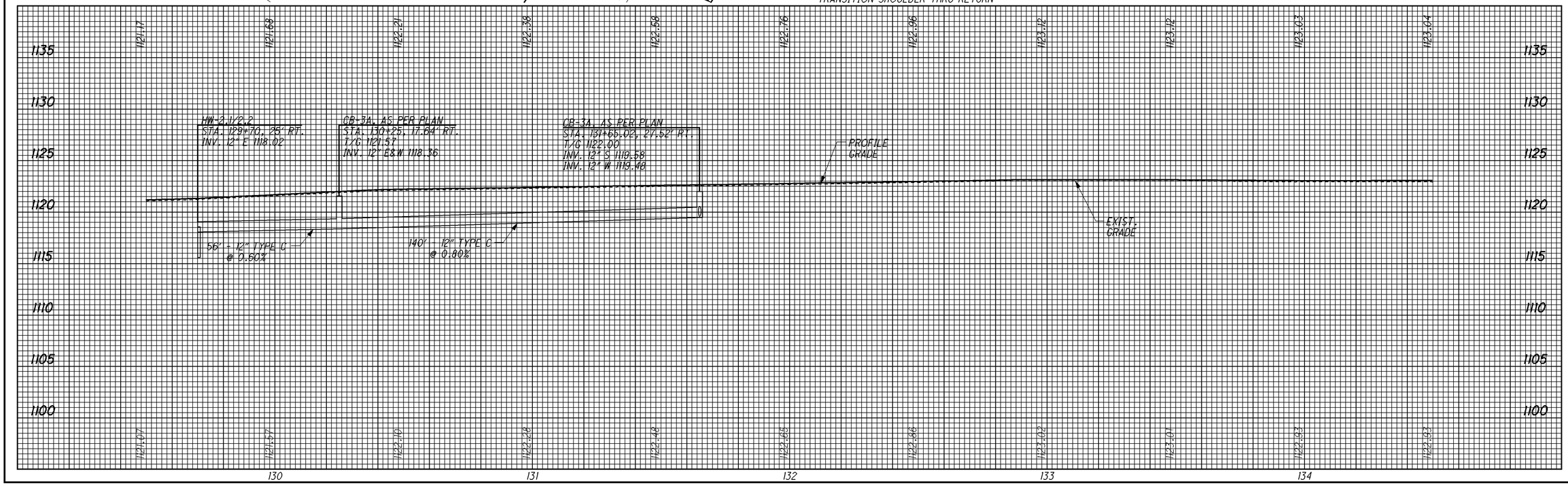
BRIDGE NO. LIC-62-02.39

125
126
127
128
129

$DATE$
$FILE$
$TIME$

FOR INTERSECTION DETAILS, SEE SHEET 58





PLAN AND PROFILE - U.S. 62
STA. 129+50 TO STA. 134+50

LIC-62-2.41

CALCULATED LAM CHECKED KJG

HORIZONTAL SCALE IN FEET

27
84

$TIME$
$DATE$
$FILE$

FOR INTERSECTION DETAILS, SEE SHEET 59

MATCH LINE - STA. 134+50
SEE SHEET NO. 27

JOE M. & TAWARA S. ENGLISH

STEEL FRAMED GARAGE

CONST. LIMITS

PROP. DITCH

TYPE E-98 ANCHOR ASSEMBLY

+94.5 +95 BEGIN TAPER LT.

+35.78 END TAPER LT.

MATCH LINE - STA. 11+00
SEE SHEET NO. 33

N 62° 35' 30" W

+00 END PAVED SHLD. RT.

+75 END TAPER RT.

EQUATION
STA. 10+55.30 ℄ CONST. BK =
STA. 10+55.43 ℄ CONST. & R/W AH
△ = 1° 39' 01" LT.

+30.83 BEGIN TAPER RT.

STA. 137+29.84, ℄ U.S. 62 =
STA. 9+96.77, ℄ CONST. DUNCAN PLAINS RD.

CONC. BLOCK COMM. BUILDING

GEORGE D. & LINDA S. HOLBROOK

EX. ASPH. COMM. DRIVE TO BE REMOVED

PROP. CONTROLLER & SIGNAL POLE

SECTION 18
SECTION 23

CONST. LIMITS

PRIVATE SIGN

EX. ASPH. COMM. DRIVE TO BE REMOVED

SEE SHEET 32 FOR PROFILE

℄ R/W DUNCAN PLAINS RD. (C.R. 33)

℄ R/W & CONSTRUCTION U.S. 62

PROP. DITCH

PROP. SIGNAL POLE

8" PINE 3-6" PINE 4" PINE 6" PINE 5 PINE 40" ELM 8-6" PINE 2-10" PINE 48" CHERRY

4" PINE 18" CHERRY 24" LOCUST 24" ELM 6" 4" 5" CONST. LIMITS 18" MAPLE 22" MAPLE

40" LOCUST 18" LOCUST 16" MAPLE 18" ELM 12" CRAB APPLE

BEECH CORNER LTD.

2 STORY FRAME RES.

+69.59 END TAPER LT.

+38.03 BEGIN TAPER LT. 6" PINE 20" MAPLE

+05 BEGIN PAVED SHLD. LT.

MATCH LINE - STA. 9+00
SEE SHEET NO. 32

℄ CONSTRUCTION DUNCAN PLAINS RD. (C.R. 33)

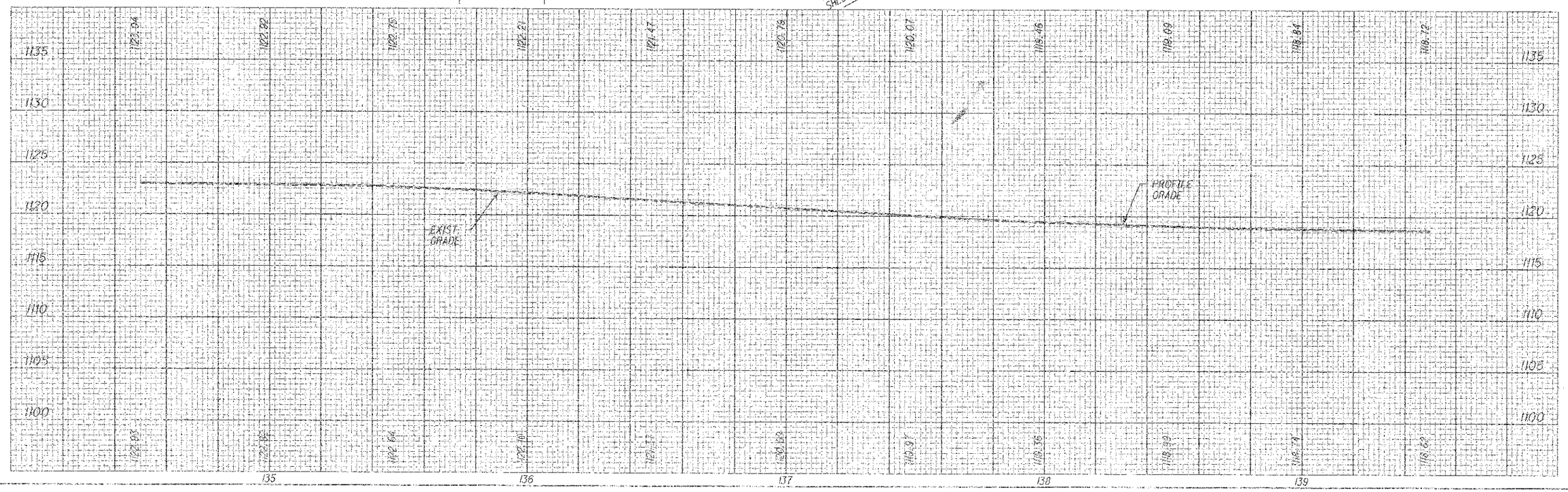
+23.14 BEGIN TAPER RT.

+60 END TAPER RT.

THOMAS E. & SHIRLEY A. DAGUE

MATCH LINE - STA. 139+50
SEE SHEET NO. 29

CURVE DATA U.S. 62
P.I. STA. 139+34.42
△ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'



PLAN AND PROFILE - U.S. 62
STA. 134+50 TO STA. 139+50

CALCULATED LAM
CHECKED KJG

HORIZONTAL SCALE IN FEET

LIC-62-2.41

28
84

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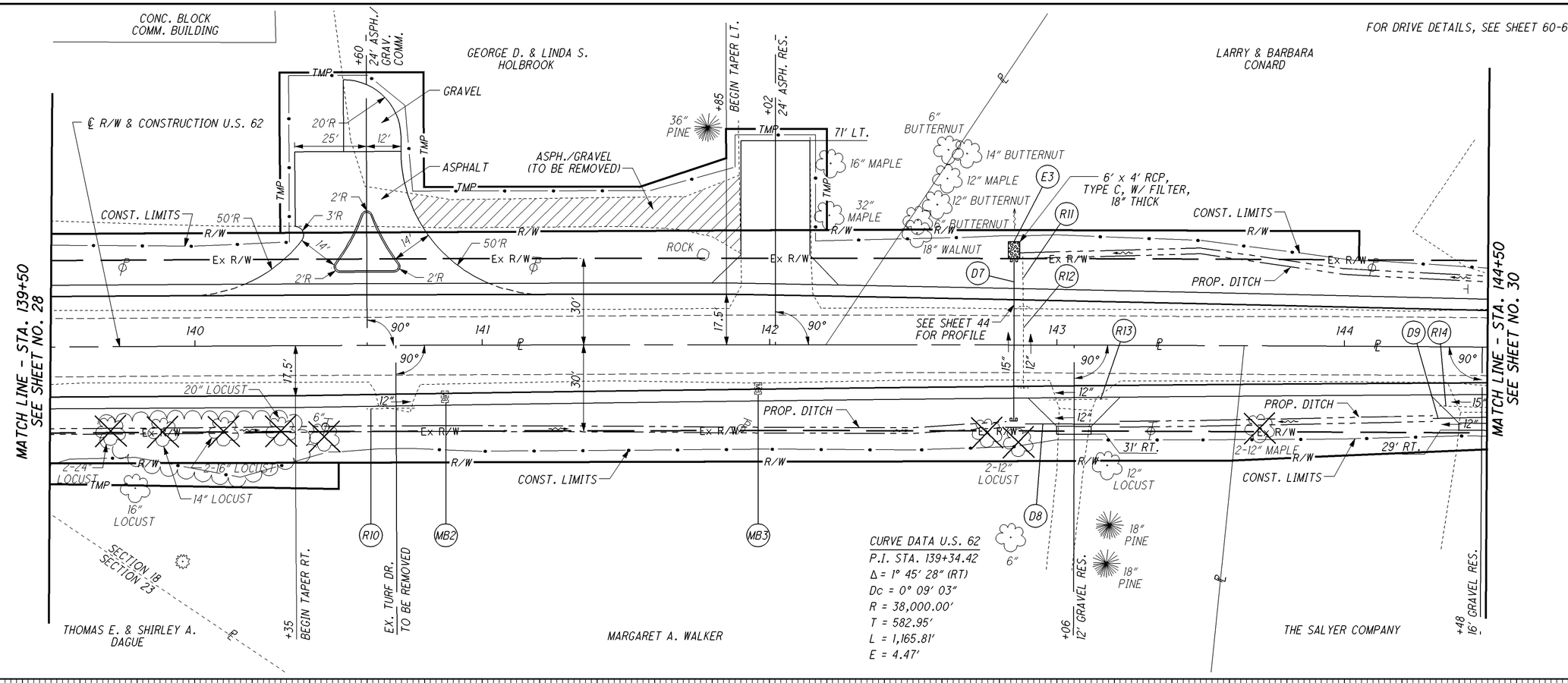
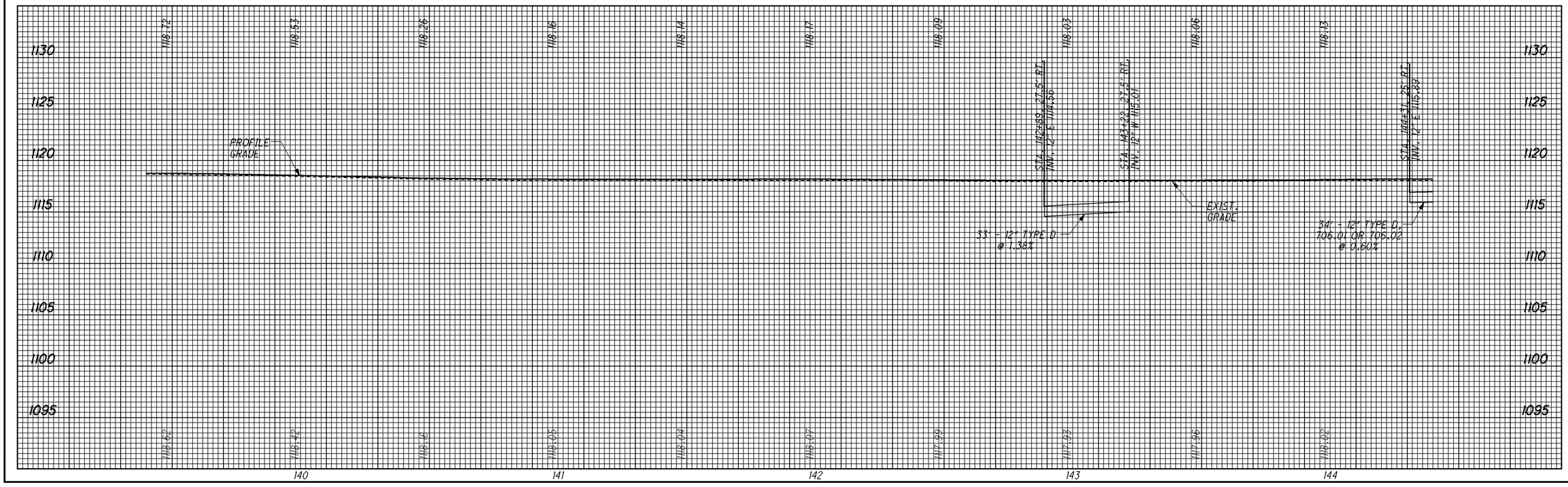




HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE - U.S. 62 STA. 139+50 TO STA. 144+50

LIC-62-2.41

29
84

$DATE$ $TIME$
$FILE$

END PROJECT
STA. 146+15.00

LARRY & BARBARA
CONARD

FOR DRIVE DETAILS, SEE SHEET 60

℄ R/W & CONSTRUCTION U.S. 62

CULTIVATED

+70 20' GRAVEL RES.

+75 BEGIN SHOULDER TAPER LT. & RT.

+15 END PAVEMENT WIDENING END TAPER LT. & RT.

TMP

33' LT.

CONST. LIMITS

Ex R/W

PR. DITCH

4"

2.5'

9.7'

10.6'

30'

90°

145

146

147

148

149

℄

N 69° 00' 03" E

MB4

12"

15"

R/W

PR. DITCH

CONST. LIMITS

R14

D9

MATCH LINE - STA. 144+50
SEE SHEET NO. 29

PT STA. 145+17.28

2"
MAPLE

THE SALYER COMPANY

JOHN & KAREN
PAGLIALUNGA

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

1130
1125
1120
1115
1110
1105
1100
1095

1118.15
1118.09
1117.93
1117.70

STA. 144+65.23' LT.
INV. 12" = 1116.09'

PROFILE GRADE

34' - 12" TYPE D,
706.01 OR 706.02
@ 0.50%

EXIST. GRADE

1118.06
1117.98
1117.82
1117.60
1117.42
1116.76
1116.27
1116.71
1116.02
1114.56
1114.29

145
146
147
148
149

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE - U.S. 62
STA. 144+50 TO STA. 149+80

LIC-62-2.41

30
84

$TIME$
$DATE$
$FILE$

MICHAEL E. & LAURA A. MOONEY

MICHAEL E. & LAURA A. MOONEY

BEECH CORNER LTD.

FOR DRIVE DETAILS, SEE SHEET 60

FIELD DR.

+81.7
39' ASPH. RES.

+21.0
12' CONC. RES.

8" PINE
8" PINE
8" PINE
10" MAPLE
18" MAPLE
12" MAPLE
36" MAPLE

D10
R15

32' LT.

PROP. DITCH
PROP. DITCH

Ex R/W
TMP
R/W
25' LT.
12"
℄ CONSTRUCTION & R/W
DUNCAN PLAINS RD. (C.R. 33)
30'
2%
11.08'
9.82'
4'
90°
1
2
3
4
5
N 51° 00' 29" W
40'
35'
17.5'
25' RT.
MB5
CONST. LIMITS
7 - 15" PINES
REMOVED

MATCH LINE - STA. 5+50
SEE SHEET NO. 32

ASPH. RES.
20" MAPLE
20" MAPLE
4" MAPLE
4" PEAR
4" PEAR

BEGIN WORK
STA. 2+25.00

+25
BEGIN PAVEMENT WIDENING
BEGIN TAPER LT. & RT.

+70.6
24' GRAVEL RES.

+75
END SHOULDER TAPER LT. & RT.

+31
END PAVEMENT TAPER RT.

KELVIN L. & MARY L. DECOT

THOMAS E. & SHIRLEY A. DAGUE

1150
1145
1140
1135
1130
1125
1120
1115

1136.76
1137.14
1136.97
1136.40
1135.71
1135.13
1134.11

100' EX. V.C.
SSD = 546 (EXCEEDS DESIGN SPEED)

EXIST. GRADE

STA. 4+64.45 (S) LT.
INV. 12" N 1134.34

STA. 4+39.45 LT.
INV. 12" S 1135.78

PROFILE GRADE

35' - 12" TYPE D,
706.01 OR 706.02
@ 1.60%

1134.63
1135.30
1135.63
1136.25
1136.65
1137.04
1136.86
1136.20
1135.60
1135.02
1134.01

0
1
2
3
4
5

$TIME$
$DATE$
$FILE$

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE - DUNCAN PLAINS RD.
STA. 0+00 TO STA. 5+50

LIC-62-2.41

FOR DRIVE DETAILS, SEE SHEET 60

BEECH CORNER LTD.

FOR PLAN DETAILS, SEE SHEET 28

FOR INTERSECTION DETAILS, SEE SHEET 59

MATCH LINE - STA. 5+50
SEE SHEET NO. 31

MATCH LINE - STA. 9+00
SEE SHEET NO. 28

MATCH LINE - STA. 11+00
SEE SHEET NO. 33

+81 END PAVEMENT TAPER LT.

PI Sta. 6+10.00
Δ = 1° 17' 50" RT.

PI Sta. 8+75.03
Δ = 1° 17' 50" LT.

+67.5 14' ASPH. RES.

CONST. LIMITS

PROP. DITCH

TMP

R/W

Ex R/W

℄ R/W DUNCAN PLAINS RD.

℄ CONSTRUCTION DUNCAN PLAINS RD.

N 51° 00' 29" W

N 49° 42' 39" W

N 52° 39' 30" W

SAWCUT

2-14" PINE

10" APPLE

12" PINE

8" PINE

6" PINE

16" PINE

ROCK

3" CRAB APPLE

16" OAK

16" MAPLE

14" ASH

6-14" OSAGE

20" OSAGE

24" OSAGE

30" OSAGE

15" OSAGE

2-10" PINE

33' RT.

48' RT.

31.5' LT.

+75.0 12' GRAVEL RES.

+91.5 12' GRAVEL RES.

+10 BUTT END JOINT
END PAVEMENT WIDENING
BEGIN FULL DEPTH
RECONSTRUCTION

+91.82 BEGIN PAVED SHLD. RT.

STA. 9+96.77, ℄ CONST. DUNCAN PLAINS RD. =
STA. 137+29.84, ℄ R/W & CONST. U.S. 62

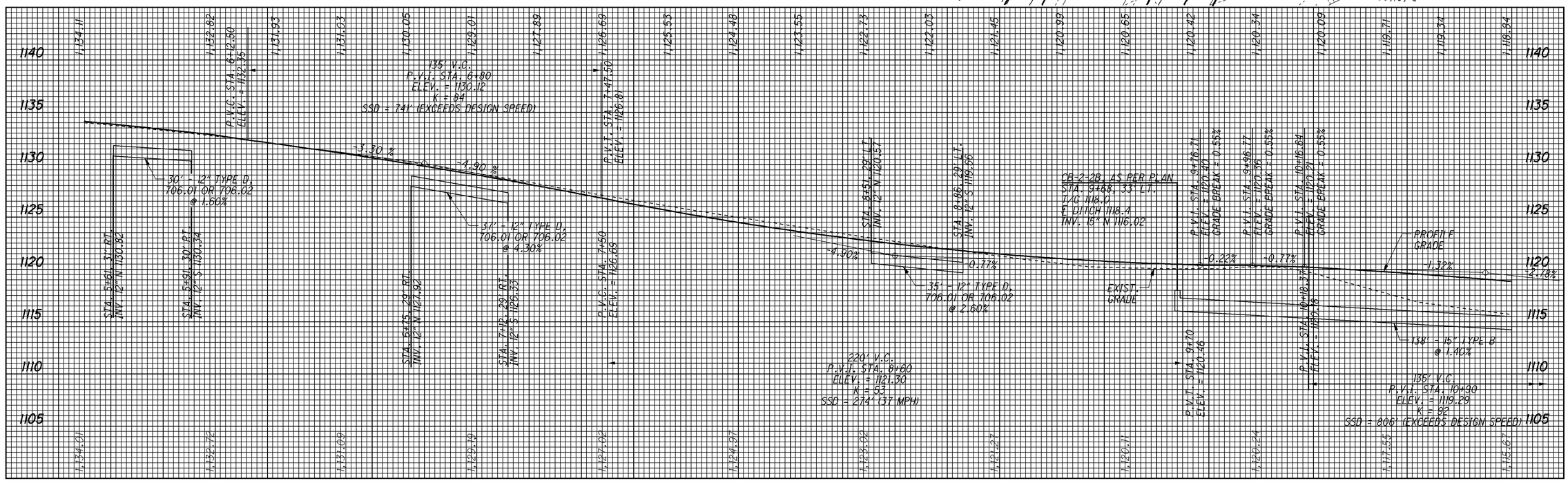
THOMAS E. & SHIRLEY A. DAGUE

℄ R/W & CONSTRUCTION U.S. 62

SECTION 23
SECTION 18

EQUATION:
STA. 10+51.30 ℄ CONST. BK =
STA. 10+55.43 ℄ CONST. & R/W
Δ = 1° 39' 00" LT.

R15 R16 R17 R18 R19 D11 D12 D13 MB6 MB7 R8



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAM
CHECKED KJG

PLAN AND PROFILE - DUNCAN PLAINS RD. STA. 5+50 TO 11+00

LIC-62-2.41

32
84

$TIME$
$DATE$
$FILE$

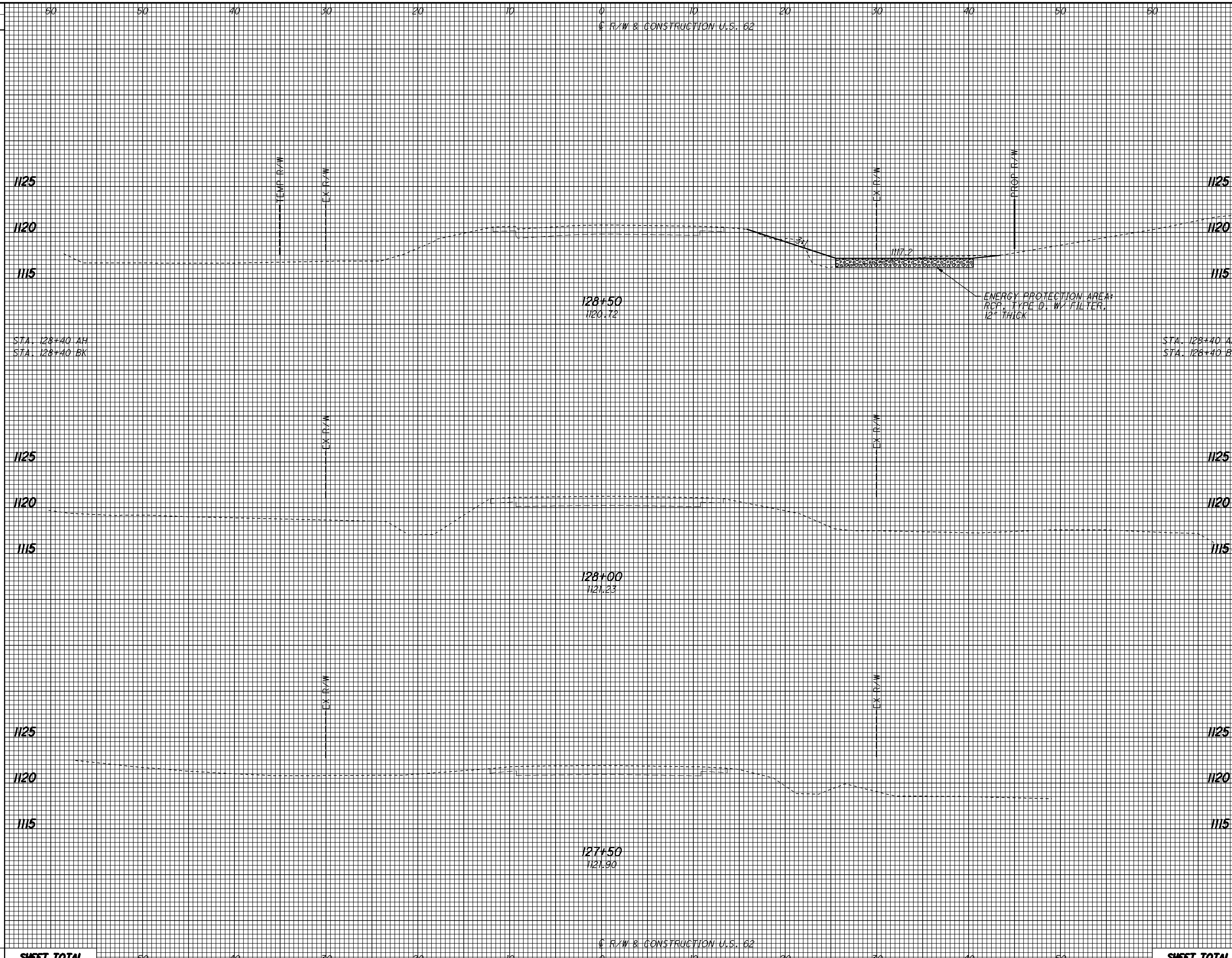
MATCH LINE - STA. 11+00
SEE SHEET NO. 32

BEGIN 8' WIDE GRAVEL AREA ABUTTING DRIVE & SHOULDER
END PAVED SHLD. LT.
16' GRAVEL COMM.
28' GRAVEL COMM.
JOE M. & TAMARA S. ENGLISH
BEGIN PAVEMENT TAPER LT.
6' x 4' RCP TYPE C, W/ FILTER. 18" THICK
CONST. LIMITS
SECTION 23
SECTION 18
BEGIN SHOULDER TAPER LT. & RT.
SECTION 17
END PAVEMENT RECONST. END TAPER LT. & RT.
FOR DRIVE DETAILS, SEE SHEET 60
END WORK STA. 14+30.00
47' LT.
2-20" MAPLE
2-20" MAPLE
32" MAPLE
18" MAPLE
18" MAPLE
20" MAPLE
4" PINE
6" ELM
15" ASH
2" PINE
60" MAPLE
8" MAPLE
24" MAPLE
36" MAPLE
PROP. DITCH
ROCKS
ROCK
N 52° 39' 30" W
SEE SHEET 58 FOR PROFILE
29' RT.
83' RT.
40'
℄ CONSTRUCTION & R/W DUNCAN PLAINS RD. (C.R. 33)
℄ CLOVER VALLEY RD. (C.R. 26)
GEORGE D. & LINDA S. HOLBROOK
35' ASPH. COMM.
19' GRAVEL COMM.
Ex R/W
TMP
R/W

335' V.C.
P.V.I. STA. 10+90
ELEV. = 1119.29
K = 92
SSD = 806'
(EXCEEDS DESIGN SPEED)
MH-3, AS PER PLAN
STA. 11+10, 10.5' LT.
T/C 1118.29
INV. 12" W 1117.54
INV. 15" S 1113.09
INV. 18" N 1113.84
-2.70 %
INV=2.7
STA. 11+95, 81' LT.
INV. 18" S 1113.24
PROFILE GRADE
+0.58 %
-2.48 %
EXIST. GRADE
138' - 15" TYPE B @ 1.40%
86' - 18" TYPE B 706.01 OR 706.02 @ 0.70%
6' x 4' R.C.P. TYPE C, W/ FILTER. 18" THICK
P.V.I. STA. 11+30
ELEV. = 1116.21
GRADE BREAK = +0.55%
WELT ENDS W/ BOOT
END JOINT
280' V.C.
P.V.I. STA. 13+00
ELEV. = 1113.46
K = 71
SSD = 395' (41 MPH)

PLAN AND PROFILE - DUNCAN PLAINS RD.
STA. 11+00 TO STA. 16+60
LIC-62-2.41
HORIZONTAL SCALE IN FEET
CALCULATED LAM
CHECKED KJG
33
84

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10		128+50	3	4		
	11				1	2
10		STA. 128+40 AH	3	4		
0		STA. 128+40 BK	0	0		
	11	SHEET TOTAL			1	2



CROSS SECTIONS - U.S. 62
STA. 127+50 TO STA. 128+50

CALCULATED LMO
CHECKED KJG

LIC-62-2.41

$DATE$ $FILE$ $TIME$

SEEDING	
END WIDTH	SQ. YDS.
32	
	194
38	
	217
40	
	150
20	
10	
	6
	587

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

℄ R/W & CONSTRUCTION U.S. 62

1130 1125 1120 1115

TEMP R/W — EX R/W — 3:1 — 2:1 — 1118.7 — 12" SITM. — EX R/W

1121.68
130+00
1121.67

1130 1125 1120 1115

TEMP R/W — EX R/W — 3:1 — 2:1 — 1117.3 — 2R — 1117.9 — EX R/W — PROP R/W

1121.17
129+50
1121.07

1125 1120 1115

TEMP R/W — EX R/W — 3:1 — 2:1 — 1117.1 — 2:1 — 1117.7 — EX R/W — PROP R/W

1120.98
129+00
1120.87

STA. 128+55 AH
STA. 128+55 BK

BEGIN PROJECT STA. 128+55
BEGIN PAVEMENT WIDENING

℄ R/W & CONSTRUCTION U.S. 62

50 40 30 20 10 0 10 20 30 40 50

SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	12		
		37	26
25	16		
		43	30
21	16		
		35	27
STA. 128+55 AH	21	16	
STA. 128+55 BK	3	4	
		1	1
		116	84

SHEET TOTAL

CALCULATED LMO
CHECKED KJG

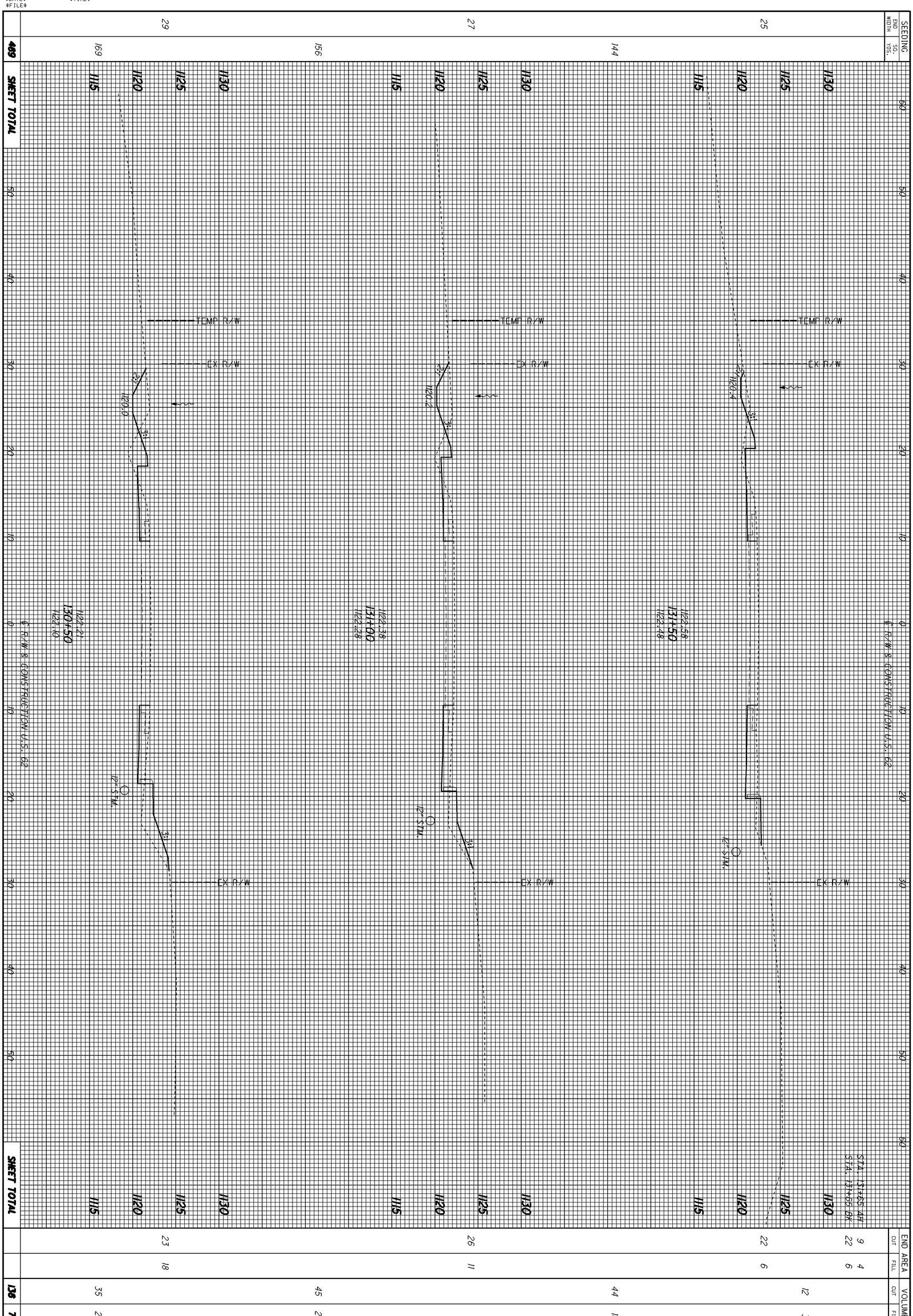
CROSS SECTIONS - U.S. 62
STA. 129+00 TO STA. 130+00

LIC-62-2.41

35
84

$TIME$
$DATE$
$FILE$

$DATE$
$FILE$
$TIME$



LIC-62-2.41

CROSS SECTIONS - U.S. 62
STA. 130+50 TO STA. 131+50

CALCULATED LMO
CHECKED KJG

36
84

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	52	87	34		
	275			187	35
	-133 ADD FOR INTERSECTION			72	0
	47				
	200			12	5
	342 SHEET TOTAL			271	40

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 132+00 TO STA. 132+50

LIC-62-2.41

$TIME$

$DATE$
$FILE$

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
42	233	19	34	45	66
42	261	30	37	81	69
52	289	57	38	133	67
	783			259	202

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 133+00 TO STA. 134+00

LIC-62-2.41

38
84

$TIME$
$DATE$
$FILE$

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47		71	8		
	239			120	16
39		59	9		
197				81	21
32		29	14		
	206			44	44
SHEET TOTAL	**642**			**245**	**81**

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 134+50 TO STA. 135+50

LIC-62-2.41

39
84

$TIME$
$DATE$
$FILE$

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		60 50 40 30 20 10 0 10 20 30 40 50 60				
		℄ R/W & CONSTRUCTION U.S. 62				
		1125 PROP R/W EX R/W EX R/W 1125				
42		1120 4:1 ℄ 1118.0 1120	61	19		
	350	1115 1115			62	35
		1110 UNDERCUT AREA: ITEM 204, EXCAVATION OF SUBGRADE ITEM 204, GRANULAR MATERIAL, TYPE C (SEE SHEET 24 FOR QUANTITY CALCULATIONS) 1110				
		1119.46 138+00 1119.36				
		STA. 137+50 AH	6	19		
		STA. 137+50 BK	0	0		
	-615	ADD FOR INTERSECTION ADD FOR INTERSECTION			110	150
42		STA. 137+25 AH				
57		STA. 137+25 BK STA. 137+29.84 = ℄ C.R. 33 (DUNCAN PLAINS RD.) STA. 137+00 AH	0	0		
		STA. 137+00 BK	36	0		
	475	1130 PROP R/W EX R/W EX R/W PROP R/W TEMP R/W 1130			100	1
57		1125 2:1 3:1 3:1 2:1 1125	72	1		
		1120 1118.13 EX TEL 1119.6 1120				
		1115 UNDERCUT AREA: ITEM 204, EXCAVATION OF SUBGRADE ITEM 204, GRANULAR MATERIAL, TYPE C (SEE SHEET 24 FOR QUANTITY CALCULATIONS) 1115				
		1121.47 136+50 1121.37				
	289				130	5
		1130 PROF R/W EX R/W EX R/W PROF R/W TEMP R/W 1130				
47		1125 2:1 3:1 3:1 2:1 1125	68	4		
		1120 1119.17 EX TEL 1120.3 1120				
	261	1115 UNDERCUT AREA: ITEM 204, EXCAVATION OF SUBGRADE ITEM 204, GRANULAR MATERIAL, TYPE C (SEE SHEET 24 FOR QUANTITY CALCULATIONS) 1115			129	11
		1122.21 136+00 1122.10				
		℄ R/W & CONSTRUCTION U.S. 62				
		60 50 40 30 20 10 0 10 20 30 40 50 60				
	780	SHEET TOTAL		SHEET TOTAL	531	202

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 136+00 TO STA. 138+00

LIC-62-2.41

40
84

$TIME$
$DATE$
$FILE$

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
45	247		30	16	59	34
44	239		34	21	65	31
42	233		36	13	90	30
	719	SHEET TOTAL			214	95

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 138+50 TO STA. 139+50

LIC-62-2.41

41
84

$TIME$
$DATE$
$FILE$

SEEDING	
END WIDTH	SQ. YDS.
	-119
	46
	256
	46
	253
	390

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
15	34
25	18
50	31
29	16
55	30
120	95

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 140+00 TO STA. 140+50

LIC-62-2.41

$TIME$

$DATE$
$FILE$

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	
						CALCULATED LMO / CHECKED KJG

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

℄ R/W & CONSTRUCTION U.S. 62

TEMP R/W | MATCH LINE SEE BELOW | PROP R/W | EX R/W | EX R/W | PROP R/W

1120 / 1115 / 1110

80 70 60

MATCH LINE SEE ABOVE

53 | 294 | 18 | 31 | 37 | 52

1118.17
142+00
1118.07

1125 / 1120 / 1115 / 1110

TEMP R/W | PROP R/W | EX R/W | EX R/W | PROP R/W

4:1 | 3:1 | 2:1 | 1115.5

CUT & FILL

53 | 294 | 22 | 25 | 44 | 43

1118.14
141+50
1118.04

ADD FOR DRIVE REMOVED

50 | 50

1125 / 1120 / 1115 / 1110

TEMP R/W | PROP R/W | EX R/W | EX R/W | PROP R/W

4:1 | 3:1 | 2:1 | 1115.8

CUT & FILL

53 | 275 | 26 | 21 | 47 | 36

1118.16
141+00
1118.05

℄ R/W & CONSTRUCTION U.S. 62

	863	SHEET TOTAL		SHEET TOTAL	178	181

$TIME$
$DATE$
$FILE$

CROSS SECTIONS - U.S. 62
STA. 141+00 TO STA. 142+00

LIC-62-2.41

43
84

SEEDING	
END WIDTH	SQ. YDS.
42	
	231
41	
	261
-98	
394	SHEET TOTAL

END AREA	
CUT	FILL
30	21
19	32
34	58
7	-11
86	96

VOLUME	
CUT	FILL
45	49
SHEET TOTAL	

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 142+02 TO STA. 143+00

LIC-62-2.41

$DATE$
$FILE$
$TIME$

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
43		21	11		
	242			35	32
44		17	24		
	239			44	42
	-38			-2	-2
	443			77	72

CALCULATED LMO

CHECKED KJG

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

℄ R/W & CONSTRUCTION U.S. 62

1125 1120 1115 1110

PROP R/W — EX R/W — EX R/W — PROP R/W

3:1 — 2% — 3:1 — 7%

1115.8 — 1115.7

UNDERCUT AREA:
ITEM 204, EXCAVATION OF SUBGRADE
ITEM 204, GRANULAR MATERIAL, TYPE C
(SEE SHEET 24 FOR QUANTITY CALCULATIONS)

1118.13
144+00
1118.02

PROP R/W — EX R/W — EX R/W — PROP R/W

3:1 — 2% — 3:1 — 2%

1113.7 — 1115.4

1118.06
143+50
1117.98

ADD FOR DRIVE — ADD FOR DRIVE

EX R/W — PROP R/W

P.V.I. 18.25+87.87
1117.65

4.0% — 3.7% — 0.6%

12" STM — 12" STM

1118.03
143+06
1117.93

℄ R/W & CONSTRUCTION U.S. 62

SHEET TOTAL — SHEET TOTAL

CROSS SECTIONS - U.S. 62
STA. 143+06 TO STA. 144+00

LIC-62-2.41

45
84

$TIME$
$DATE$
$FILE$

SEEDING	
END WIDTH	SQ. YDS.
	-19
	33
	211
147	SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2	-3
		19	8
		3	-3
		37	18
		42	12

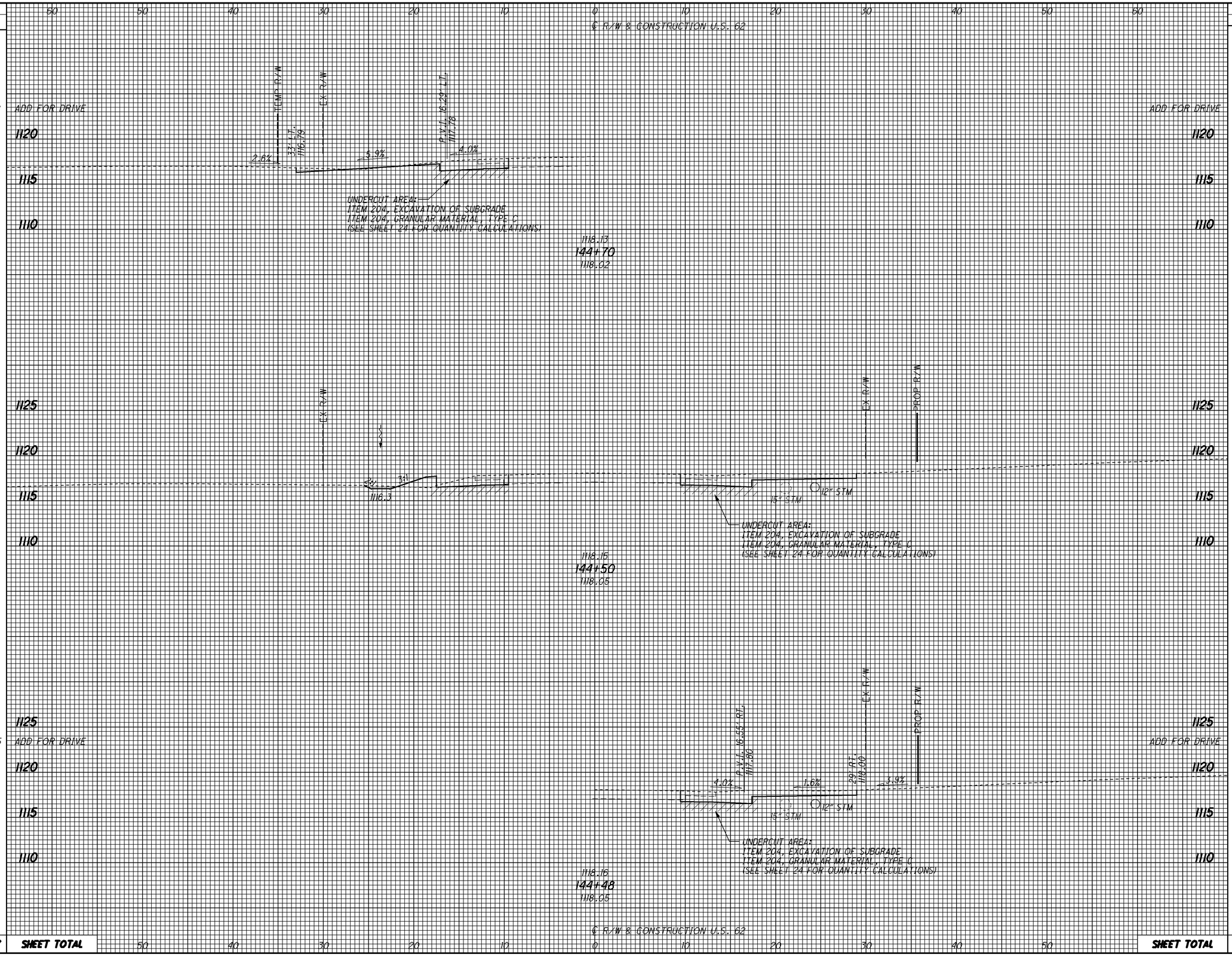
CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 144+48 TO STA. 144+70

LIC-62-2.41

$TIME$
$DATE$
$FILE$



SEEDING	
END WIDTH	SQ. YDS.
0	
33	
	55
33	
	178
31	
	175
32	
	181
	589

END AREA	
CUT	FILL
0	0
12	4
12	4
15	7
17	8

VOLUME	
CUT	FILL
7	2
25	10
30	14
33	15
95	41

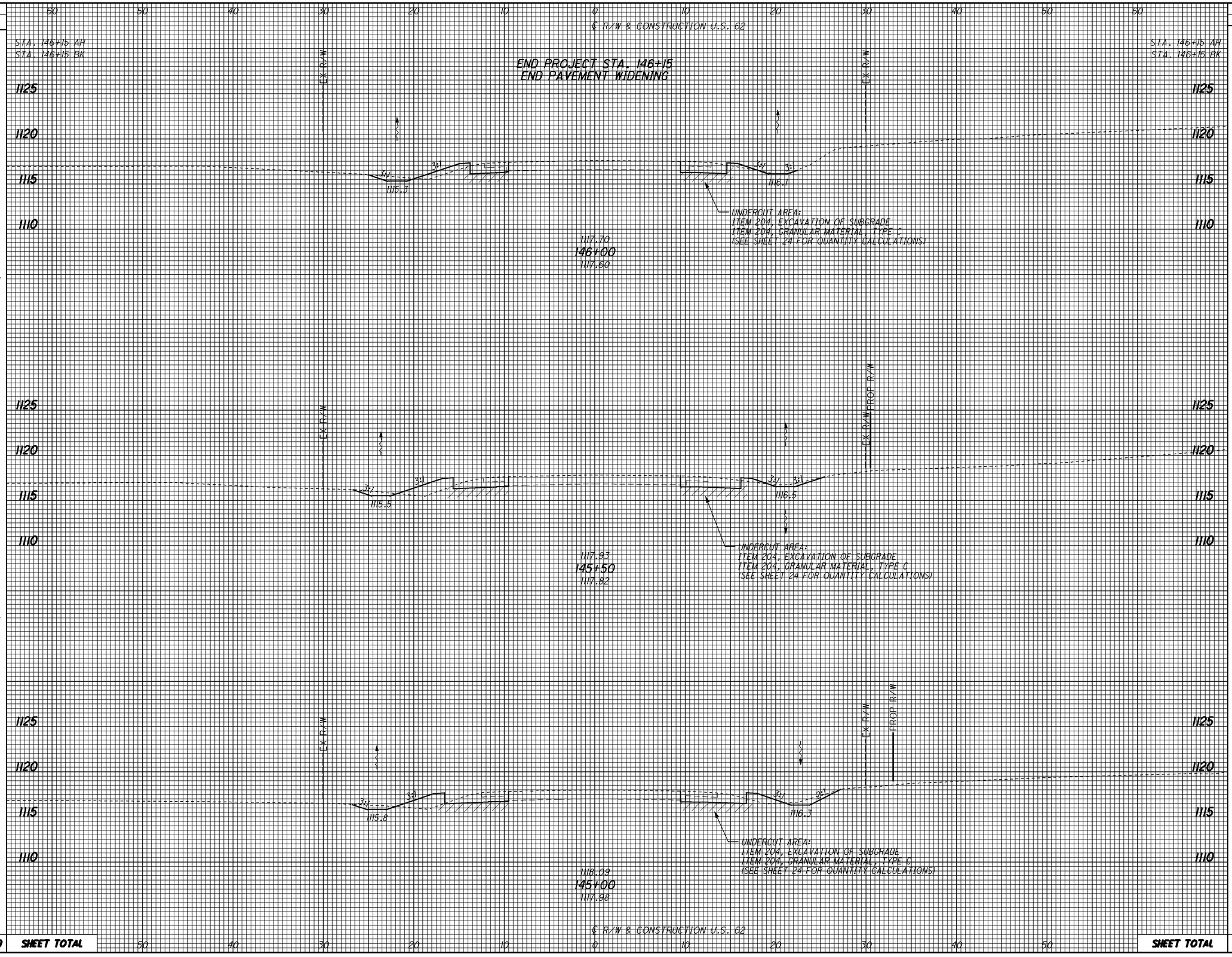
CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - U.S. 62
STA. 145+00 TO STA. 146+00

LIC-62-2.41

47
84



$TIME$
$DATE$
$FILE$

SEEDING	
END WIDTH	SQ. YDS.

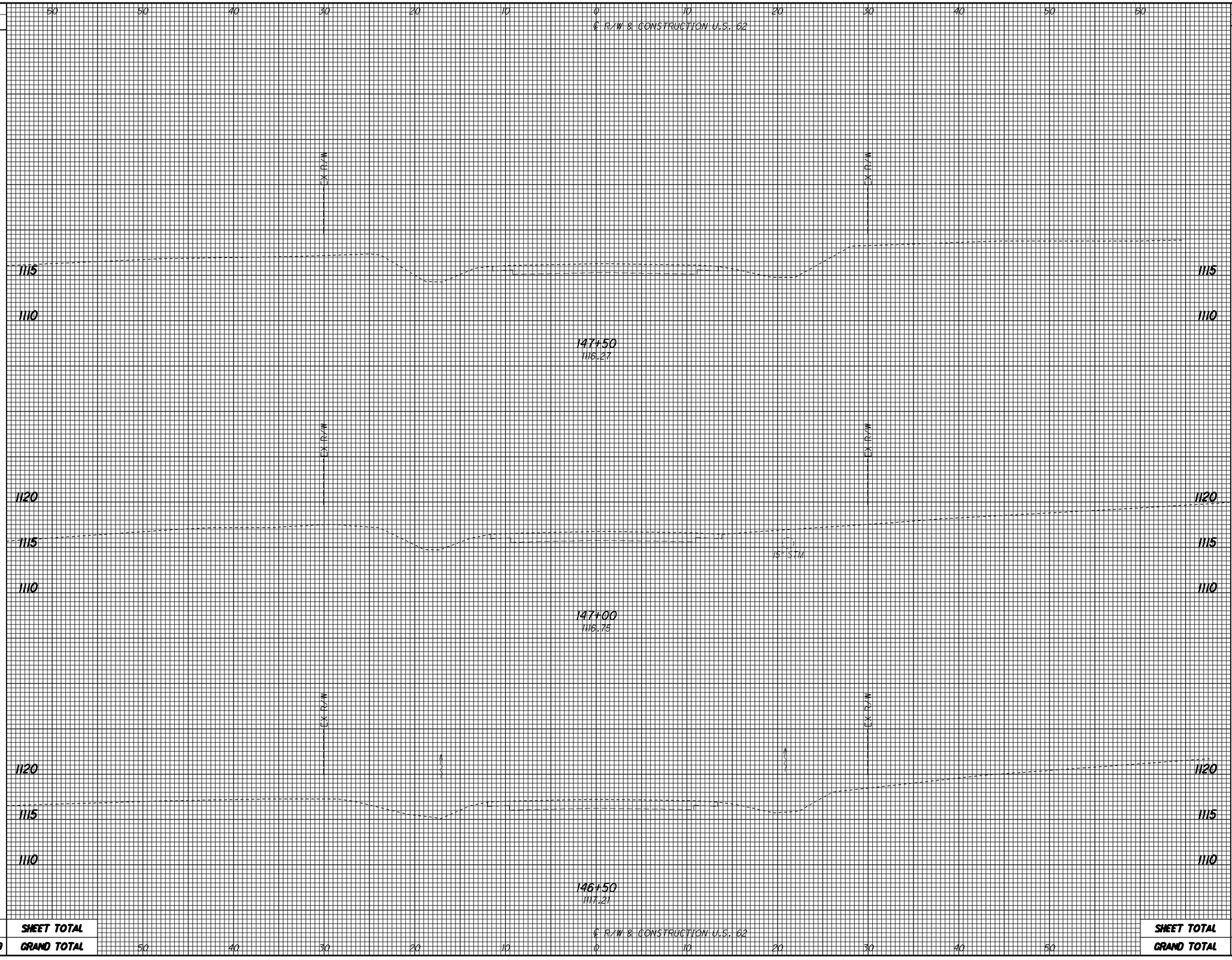
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LMO

CHECKED KJG

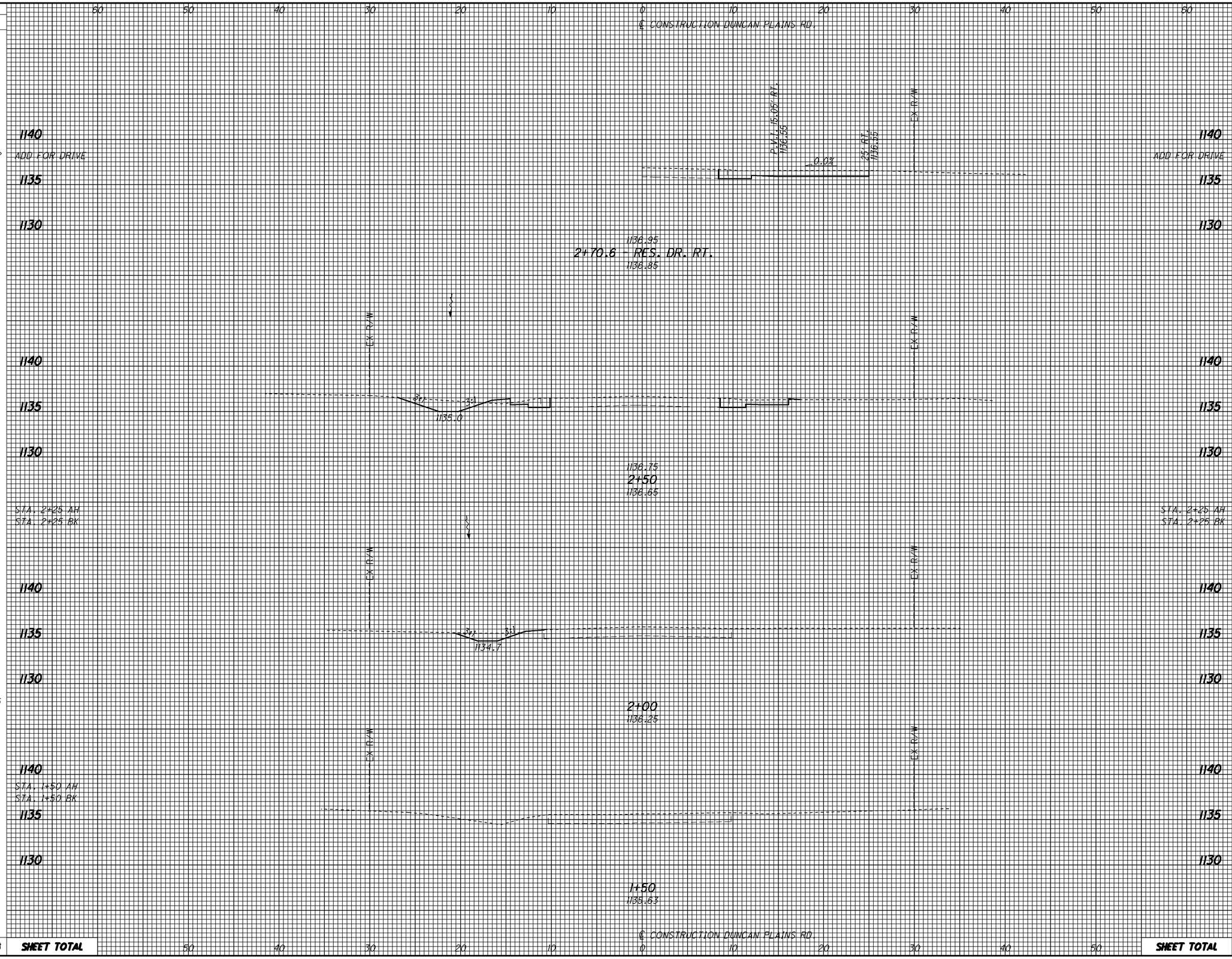
CROSS SECTIONS - U.S. 62
STA. 146+50 TO STA. 147+50

LIC-62-2.41



0	SHEET TOTAL			SHEET TOTAL		0	0
7119	GRAND TOTAL			GRAND TOTAL		2371	1277

$TIME$
$DATE$
$FILE$



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				4	0
		15	1		
				14	1
		15	1		
		4	0		
				4	0
		4	0		
				4	0
		0	0		
	196 SHEET TOTAL			26	1 SHEET TOTAL

CALCULATED LMO
CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD. STA. 1+50 TO STA. 2+70.6

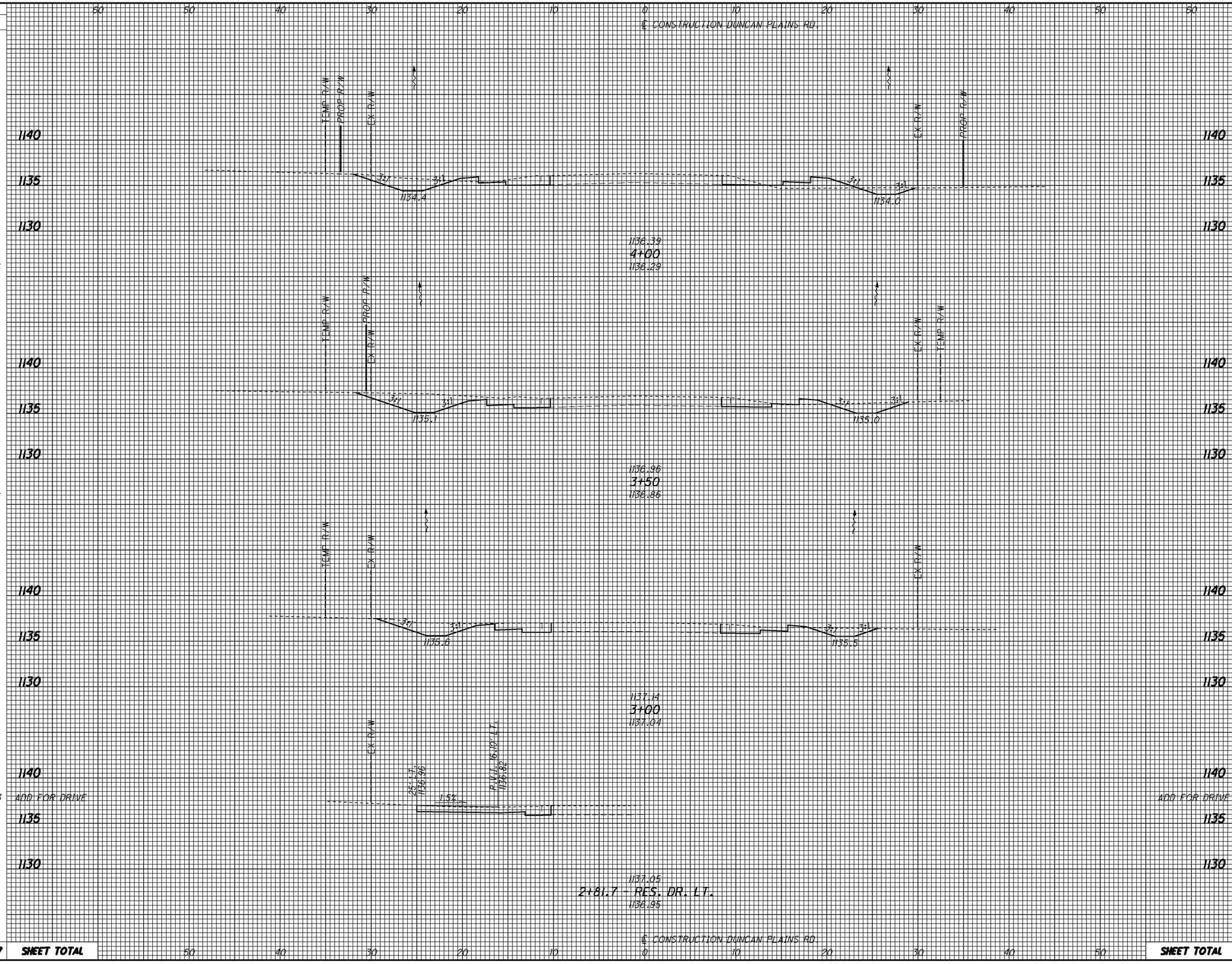
LIC-62-2.41

$TIME$
$DATE$
$FILE$

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
34		19	7		
	186			48	8
33		33	2		
33		24	1		
	183			53	3
-43	ADD FOR DRIVE	ADD FOR DRIVE		-2	-1
	181			36	2
	507 SHEET TOTAL	SHEET TOTAL		135	12

CALCULATED LMO

CHECKED KJG



CROSS SECTIONS - DUNCAN PLAINS RD. STA. 2+81.7 TO STA. 4+00

LIC-62-2.41

$TIME$
$DATE$
$FILE$

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
		60 50 40 30 20 10 0 10 20 30 40 50 60				
		℄ CONSTRUCTION DUNCAN PLAINS RD.				
		1140 / 1135 / 1130 / 1125				
		PROP R/W, EX R/W, TEMP R/W				
38		3:1, 3:1, 1132.0, 1131.0	31	5		
		1134.11				
		5+50				
		1134.01				
	214				55	18
		1140 / 1135 / 1130 / 1125				
		PROP R/W, EX R/W, TEMP R/W				
39		3:1, 3:1, 1132.8, 1131.7	28	14		
		1135.12				
		5+00				
		1135.02				
	217				46	25
		1140 / 1135 / 1130 / 1125				
		PROP R/W, EX R/W, TEMP R/W				
39		3:1, 3:1, 1133.6, 1132.1	22	13		
		1135.70				
		4+50				
		1135.60				
	203				38	19
		1140 / 1135 / 1130				
		PROP R/W, EX R/W, P.V.I. 18.61' LT., 32' LT., 1136.48, 1135.66, 6.1%, 12" STM.				
-33	ADD FOR DRIVE				3	-1
		1136.11				
		4+21.0 - RES. DR. LT.				
		1136.01				
		℄ CONSTRUCTION DUNCAN PLAINS RD.				
		60 50 40 30 20 10 0 10 20 30 40 50 60				
601	SHEET TOTAL		SHEET TOTAL		142	61

ADD FOR DRIVE

ADD FOR DRIVE

CALCULATED LMO

CHECKED KJG

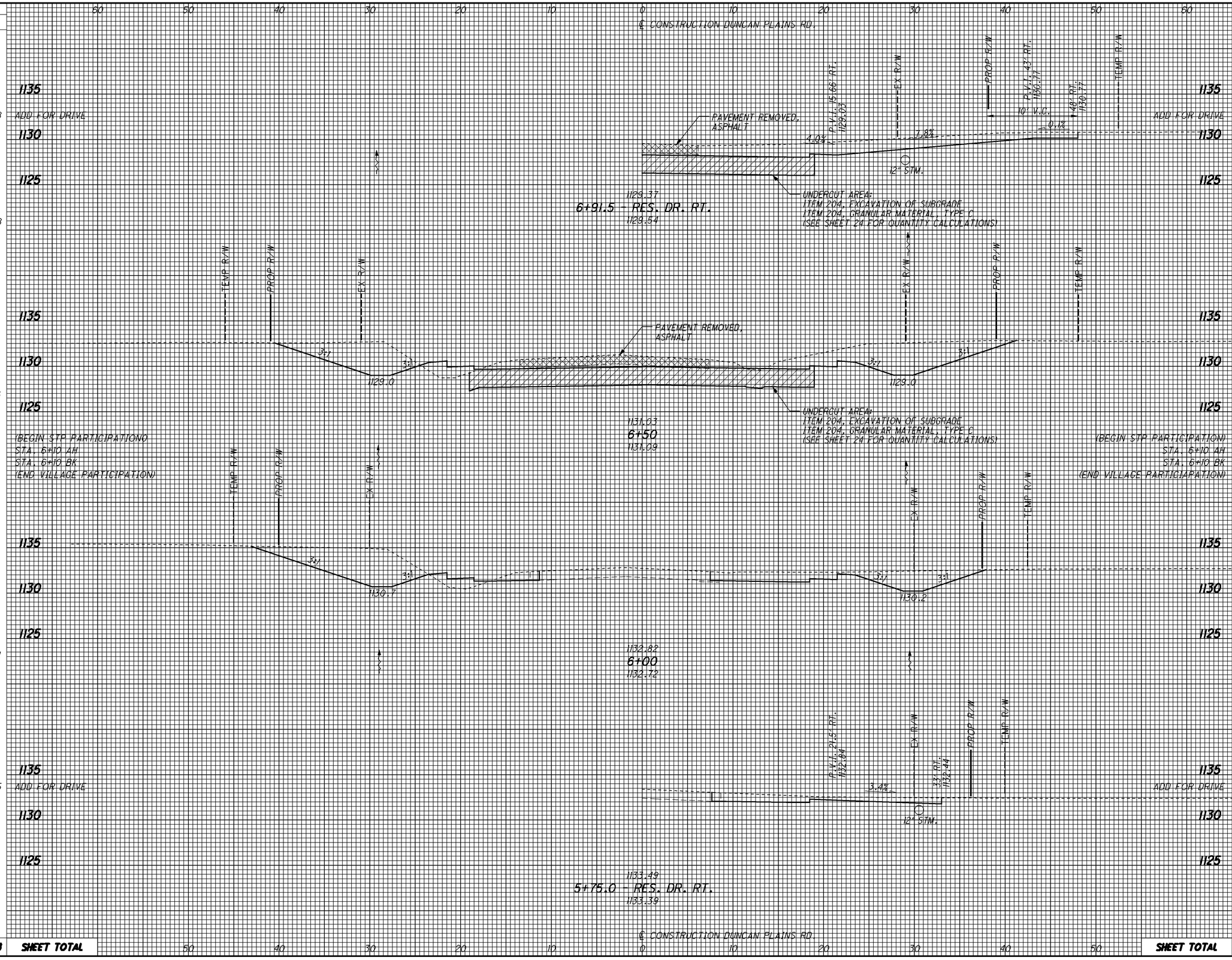
CROSS SECTIONS - DUNCAN PLAINS RD. STA. 4+21.0 TO STA. 5+50

LIC-62-2.41

51
84

$TIME$
$DATE$
$FILE$

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		℄ CONSTRUCTION DUNCAN PLAINS RD.				
	-48	ADD FOR DRIVE			-5	0
	258				175	12
	51		92	7		
46	216	(BEGIN STP PARTICIPATION)			136	10
46		STA. 6+10 AH	92	7		
		STA. 6+10 BK	81	5		
		(END VILLAGE PARTICIPATION)				
	51				30	2
45			81	5		
	231				104	9
	-35	ADD FOR DRIVE			-3	-1
		℄ CONSTRUCTION DUNCAN PLAINS RD.				
673		SHEET TOTAL			437	32



CALCULATED LMO
CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD.
STA. 5+75.0 TO STA. 6+91.5

LIC-62-2.41

52
84

$TIME$
$DATE$
$FILE$

SEEDING	
END WIDTH	SQ. YDS.
37	
	206
37	
	225
44	
	239
42	
670	**SHEET TOTAL**

END AREA		VOLUME	
CUT	FILL	CUT	FILL
59	1		
		131	4
83	3		
		161	6
91	4		
		174	9
97	6		
SHEET TOTAL		**466**	**19**

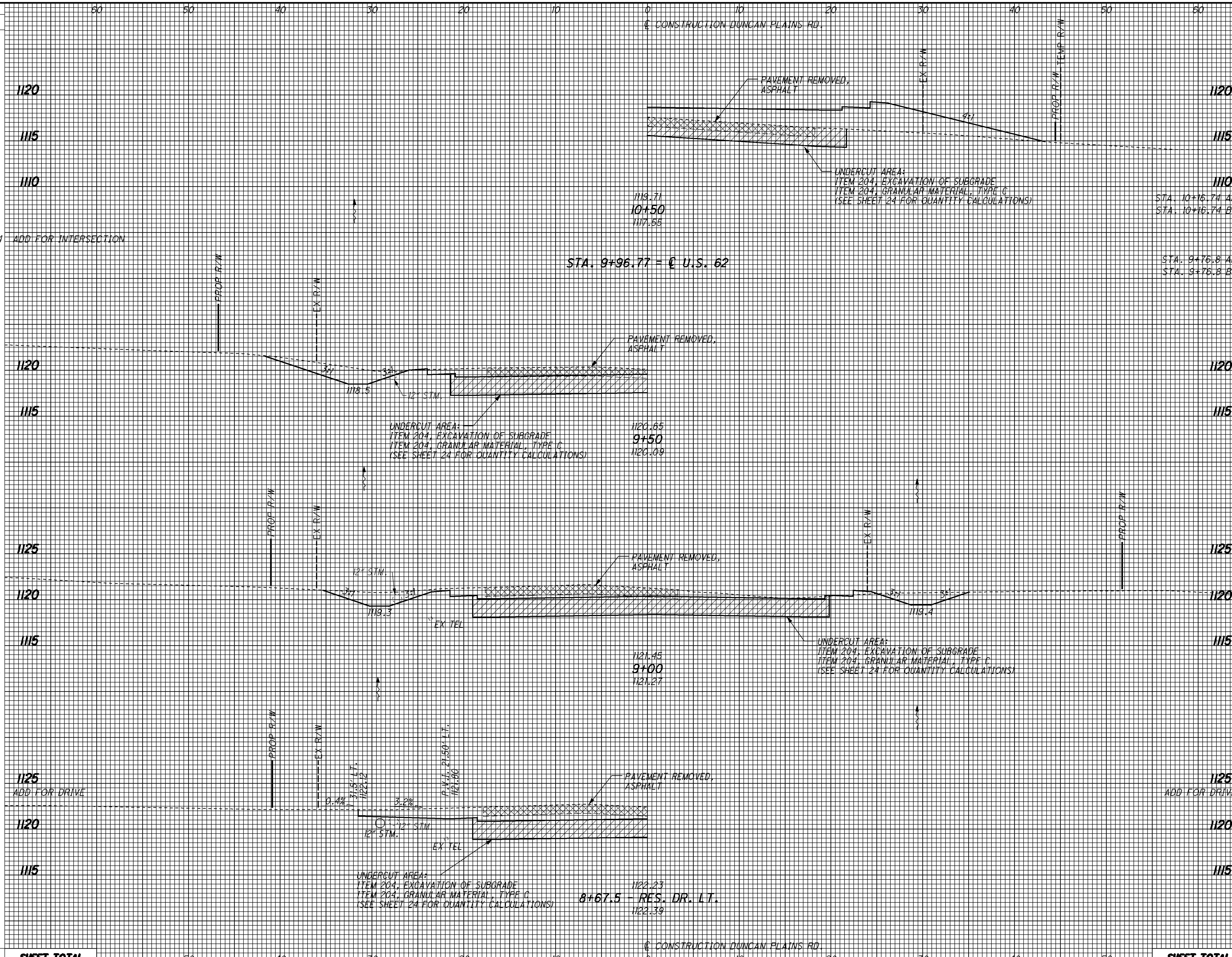
CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD. STA. 7+00 TO STA. 8+50

LIC-62-2.41

$DATE$
$FILE$
$TIME$



℄ CONSTRUCTION DUNCAN PLAINS RD.
50 50 40 30 20 10 0 10 20 30 40 50 60
1120 1115 1110
PAVEMENT REMOVED, ASPHALT
EX R/W
PROP R/W
TEMP R/W
4:1
UNDERCUT AREA:
ITEM 204, EXCAVATION OF SUBGRADE
ITEM 204, GRANULAR MATERIAL, TYPE C
(SEE SHEET 24 FOR QUANTITY CALCULATIONS)
1119.71
10+50
1117.55
STA. 9+96.77 = ℄ U.S. 62
1120 1115
3:1
1118.5
12" STM.
1120.65
9+50
1120.09
1125 1120 1115
12" STM.
1119.3
EX TEL
1119.4
1121.45
9+00
1121.27
0.4%
3.2%
31.5' LT.
1122.12
P.V.I. 21.50' LT.
1121.80
12" STM.
EX TEL
1122.23
8+67.5 - RES. DR. LT.
1122.39
℄ CONSTRUCTION DUNCAN PLAINS RD.

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37		10+50	0	102		
	411				0	126
		STA. 10+16.74 AH	0	102		
		STA. 10+16.74 BK	0	0		
	-434	ADD FOR INTERSECTION				
		STA. 9+76.8 AH	0	0		
		STA. 9+76.8 BK	12	0		
					12	0
37		9+50	12	0		
	206				41	1
37		9+00	32	1		
	206				84	2
	-38	ADD FOR DRIVE			1	0
	351	SHEET TOTAL			138	129

CALCULATED LMO
CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD.
STA. 8+67.5 TO STA. 10+50

LIC-62-2.41

SEEDING				END AREA		VOLUME	
END WIDTH	SQ. YDS.			CUT	FILL	CUT	FILL
		60 50 40 30 20 10 0 10 20 30 40 50 60					
		℄ CONSTRUCTION DUNCAN PLAINS RD.					
	-51	ADD FOR DRIVE	ADD FOR DRIVE			-1	2
		1120 / 1115 / 1110	1120 / 1115 / 1110				
		TEMP R/W; 47' L.T. 1115.94; PROP R/W; P.V.I. 34.5' L.T. 1115.84; EX R/W; 10' V.C.; P.V.I. 21.50' L.T. 1116.76; 0.0%; 7.0%; PAVEMENT REMOVED, ASPHALT; 18" STM.; 12" STM.; EX TEL					
		1117.19					
		111+65.7 - COMM. DR. LT.					
		1114.34					
	37	1120 / 1115 / 1110	1120 / 1115 / 1110				
		TEMP R/W; EX R/W; EX R/W; 18" STM.; 12" STM.; EX TEL; PAVEMENT REMOVED, ASPHALT		4	152		
		1117.62					
		111+50					
		1114.61					
	-30	ADD FOR DRIVE	ADD FOR DRIVE			1	3
		1120 / 1115 / 1110	1120 / 1115 / 1110				
		TEMP R/W; 47' L.T. 1116.42; PROP R/W; P.V.I. 34.7' L.T. 1116.42; EX R/W; 10' V.C.; P.V.I. 21.50' L.T. 1117.54; 0.0%; 7.0%; PAVEMENT REMOVED, ASPHALT; 18" STM.; 12" STM.; EX TEL					
		1117.67					
		111+44.2 - COMM. DR. LT.					
		1114.64					
	206	CB-2 2B, AS PER PLAN STA. 11+10, 27.5' LT. T/G 1116.2 F. DITCH 1116.5 INV. 12" E 1114.42	MH-3, AS PER PLAN STA. 11+10, 19.5' LT. T/C 1118.24 INV. 12" W 1114.34 INV. 15" S 1114.09 INV. 18" N 1113.84			6	291
		1120 / 1115 / 1110	1120 / 1115 / 1110				
	37	TEMP R/W; PROP R/W; EX R/W; 3:1; 3:1; 8" - 12" TYPE B @ 1.00%; 12" STM.; EX TEL; EX R/W; PROP R/W; TEMP R/W; 4:1; PAVEMENT REMOVED, ASPHALT		2	162		
	189	1118.84				2	224
		11+00					
		1115.67					
		℄ CONSTRUCTION DUNCAN PLAINS RD.					
	314	SHEET TOTAL				8	520
				SHEET TOTAL			

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD. STA. 11+00 TO STA. 11+65.7

LIC-62-2.41

55
84

$TIME$

$DATE$
$FILE$

SEEDING	
END WIDTH	SQ. YDS.
37	219
42	239
44	-135
	225
	548

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	68		
		8	156
4	100		
		10	199
7	115		
		12	81
		10	247
		40	683

CALCULATED LMO

CHECKED KJG

CROSS SECTIONS - DUNCAN PLAINS RD. STA. 11+88.2 TO STA. 13+00

LIC-62-2.41

56
84

$TIME$
$DATE$
$FILE$

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

℄ CONSTRUCTION DUNCAN PLAINS RD.

1120 / 1115 / 1110 / 1105

TEMP R/W — PROP R/W — EX R/W — EX R/W — TEMP R/W

3:1 — 4:1

1111.2 — EX TEL — PAVEMENT REMOVED, ASPHALT

1114.55
13+00
1113.23

1112.2 — EX TEL — PAVEMENT REMOVED, ASPHALT

1115.26
12+50
1113.46

1113.2 — 12" STM. — EX TEL — PAVEMENT REMOVED, ASPHALT

1116.29
12+00
1113.86

P.V.I. 21.50' RT.
1116.45

EX R/W — MATCH LINE — 7.8% — 0.0%

10' V.C.

P.V.I. 78' RT.
1111.73

83' RT.
1111.73

TEMP R/W — MATCH LINE

ADD FOR DRIVE — ADD FOR DRIVE

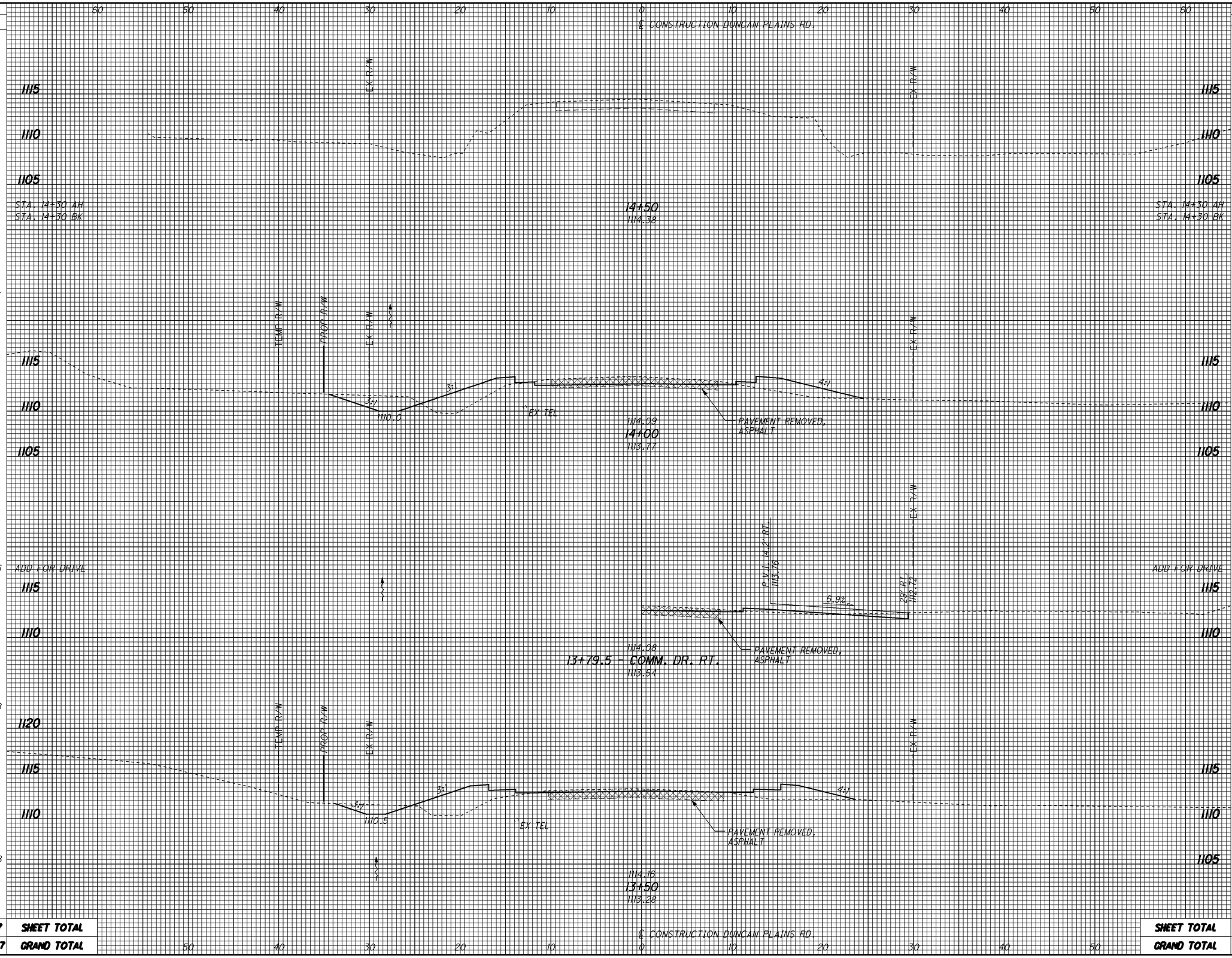
1116.58
11+88.2 - COMM. DR. RT.
1113.97

PAVEMENT REMOVED, ASPHALT

SHEET TOTAL — SHEET TOTAL

℄ CONSTRUCTION DUNCAN PLAINS RD.

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		CALCULATED LMO / CHECKED KJG				
0		STA. 14+30 AH	0	0		
44		STA. 14+30 BK	12	36		
	147				13	40
44			12	36		
-46		ADD FOR DRIVE			2	-6
228					17	78
38			6	48		
208					10	107
537	SHEET TOTAL				42	219
4397	GRAND TOTAL				1434	1678

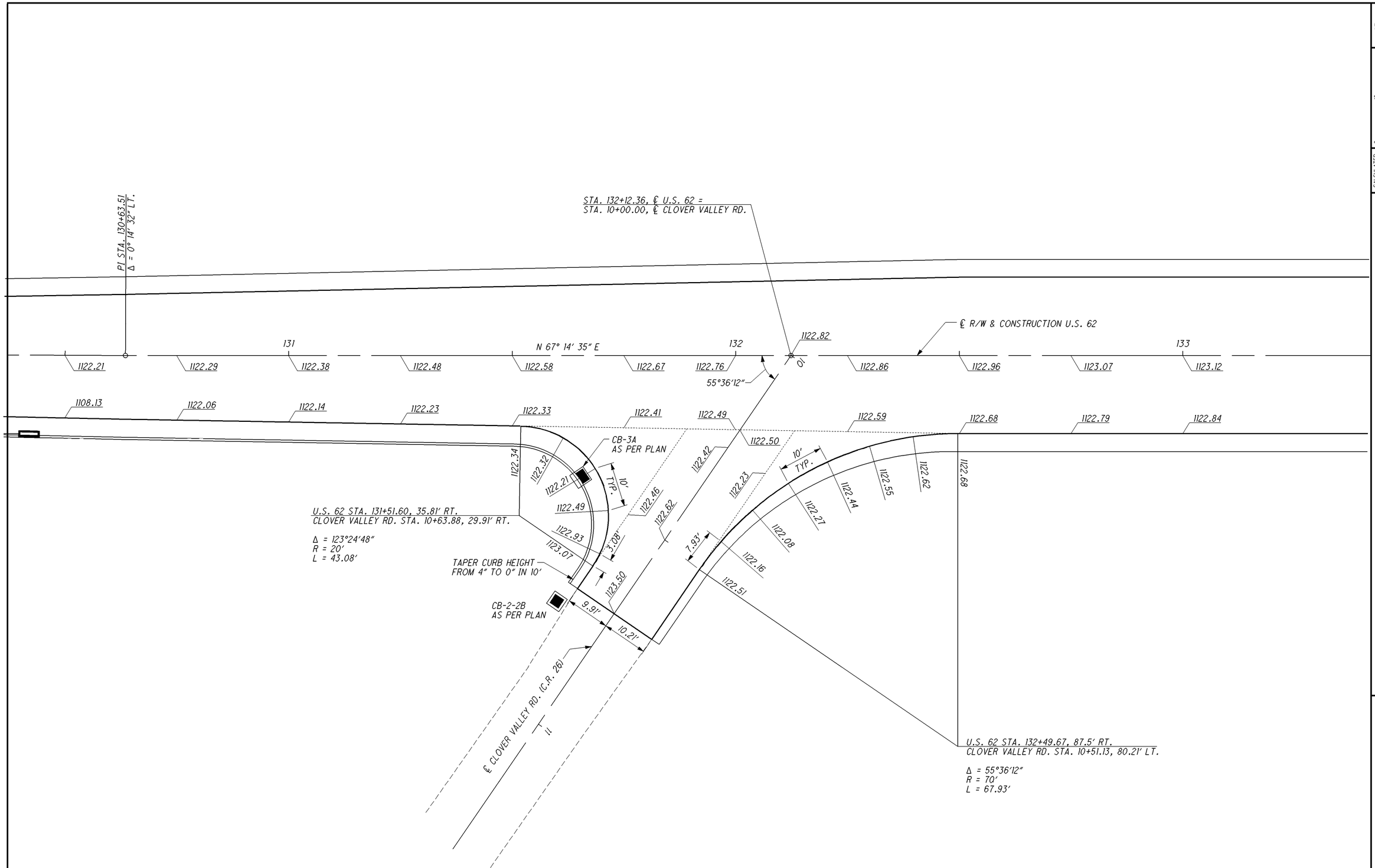


CROSS SECTIONS - DUNCAN PLAINS RD. STA. 13+50 TO STA. 14+50

LIC-62-2.41

57
84

$TIME$
$DATE$
$FILE$



NOTE: RADII DATA AND ELEVATIONS ARE ALONG EDGE OF PAVEMENT

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED LAM
CHECKED KJG

INTERSECTION DETAILS
U.S. 62 & CLOVER VALLEY RD.

LIC-62-2.41

58
84

$DATE$ $TIME$
$FILE$

MH-3
AS PER PLAN

CB-2-2B
AS PER PLAN

U.S. 62 STA. 136+26.09, 66.49' LT.
DUNCAN PLAINS RD. STA. 11+10.81, 57.50' LT.

Δ = 106°16'57"
R = 40'
L = 74.20'

N 52° 39' 30" W

EQUATION:
STA. 10+51.30 BK =
STA. 10+55.43 AH
Δ = 1°39'01" LT.

U.S. 62 STA. 137+81.29, 77.50' LT.
DUNCAN PLAINS RD. STA. 10+39.79, 82.51' RT.

Δ = 52°19'35"
R = 60'
L = 54.80'

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

4:1 TAPER

6:1 TAPER

5:1 TAPER

5:1 TAPER

℄ CONSTRUCTION DUNCAN PLAINS RD.
N 51° 00' 29" W

℄ R/W & CONSTRUCTION U.S. 62

STA. 137+29.84, ℄ U.S. 62 =
STA. 9+96.77, ℄ DUNCAN PLAINS RD.

U.S. 62 STA. 136+83.77, 67.50' RT.
DUNCAN PLAINS RD. STA. 9+59.77, 72.84' LT.

Δ = 49°55'43"
R = 50'
L = 43.57'

U.S. 62 STA. 138+30.98, 64.10' RT.
DUNCAN PLAINS RD. STA. 8+91.82, 57.50' RT.

Δ = 107°40'29"
R = 40'
L = 75.17'

NOTE: RADII DATA AND ELEVATIONS ARE ALONG EDGE OF PAVEMENT

HORIZONTAL SCALE IN FEET
0 5 10 20

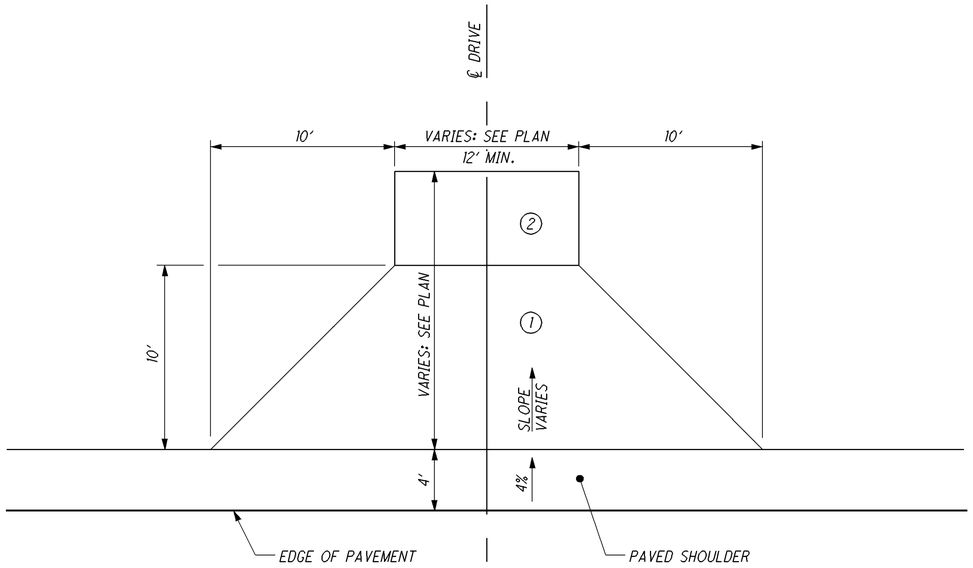
CALCULATED LAM
CHECKED KJG

INTERSECTION DETAILS
U.S. 62 & DUNCAN PLAINS RD.

LIC-62-2.41

59
84

$TIME$
$DATE$
$FILE$



DRIVE WITH PAVED SHOULDER

ASPHALT RESIDENTIAL

(1)(2) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 3¾" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)

ASPHALT COMMERCIAL

(1)(2) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 4¾" ASPHALT CONCRETE BASE - PG64-22 (DRIVEWAYS)

GRAVEL COMMERCIAL

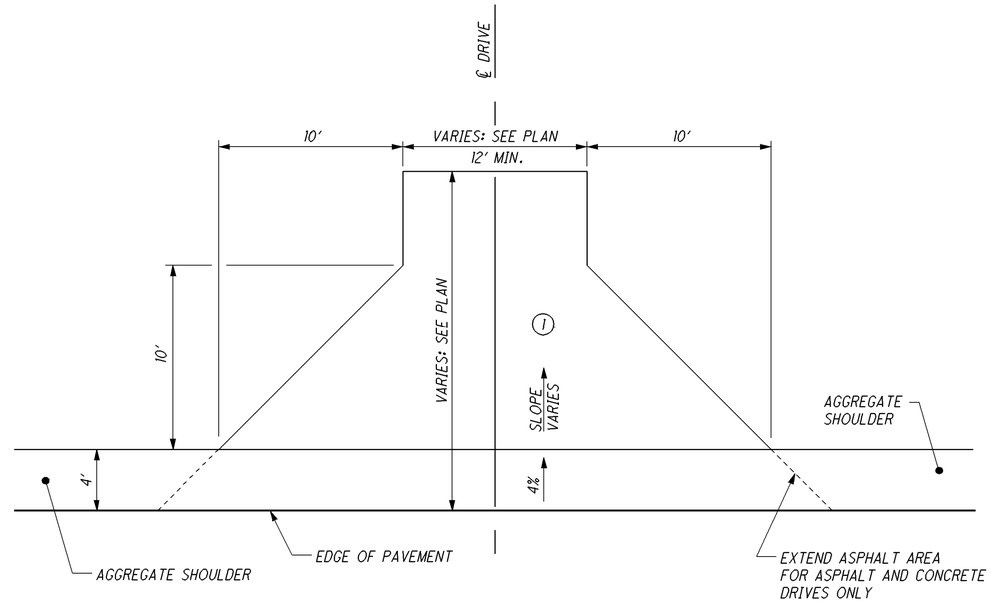
(1) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 4¾" ASPHALT CONCRETE BASE - PG64-22 (DRIVEWAYS)

(2) ITEM 304 - 8" AGGREGATE BASE

GRAVEL RESIDENTIAL

(1) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 3¾" ASPHALT CONCRETE BASE - PG64-22 (DRIVEWAYS)

(2) ITEM 304 - 6" AGGREGATE BASE



DRIVE WITH AGGREGATE SHOULDER

ASPHALT RESIDENTIAL

(1) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 3¾" ASPHALT CONCRETE BASE - PG64-22 (DRIVEWAYS)

ASPHALT COMMERCIAL

(1) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)
ITEM 301 - 4¾" ASPHALT CONCRETE BASE - PG64-22 (DRIVEWAYS)

GRAVEL COMMERCIAL

(1) ITEM 304 - 8" AGGREGATE BASE

GRAVEL RESIDENTIAL

(1) ITEM 304 - 6" AGGREGATE BASE

CONCRETE RESIDENTIAL

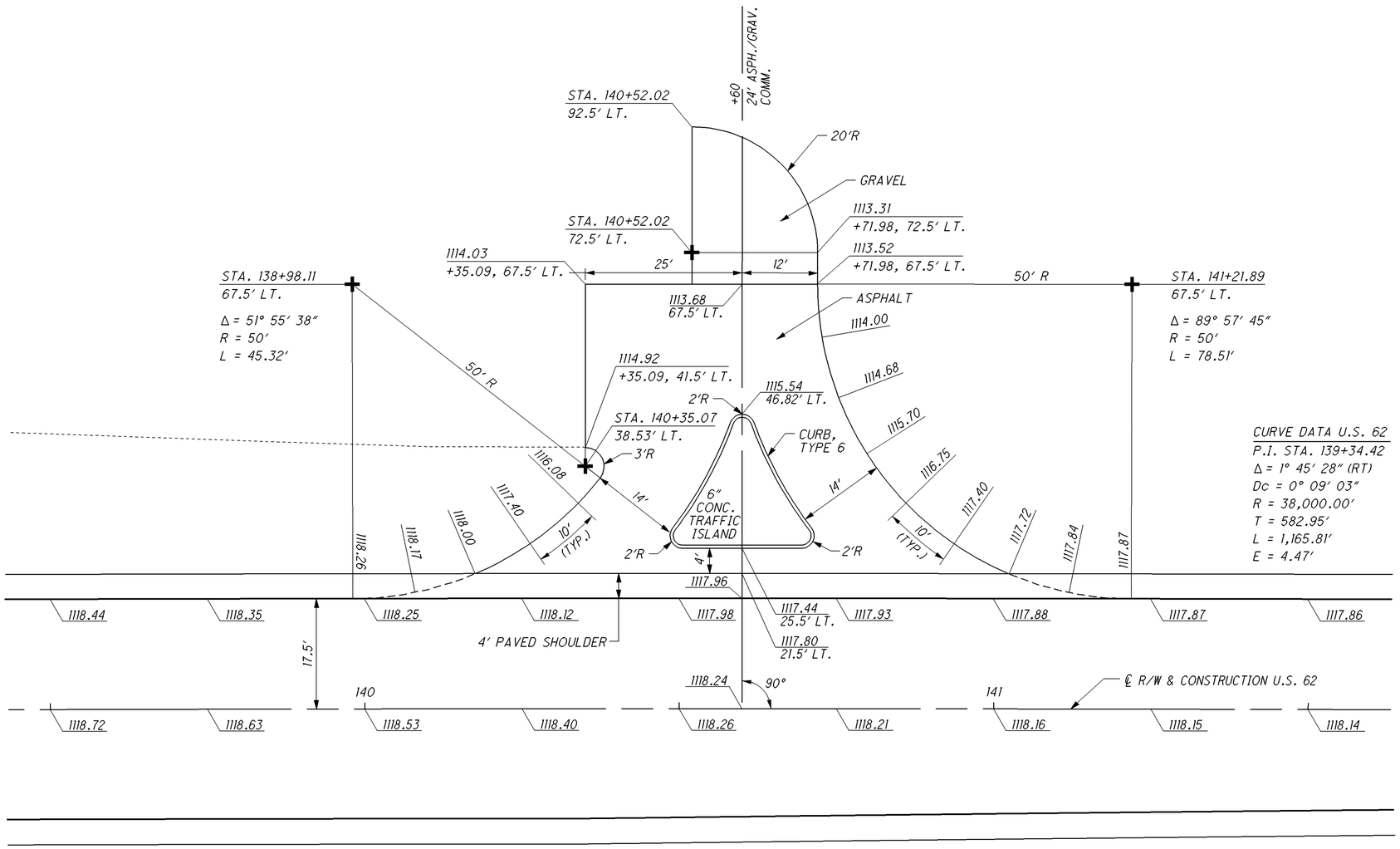
(1) ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT

CALCULATED LMO
CHECKED KJG

DRIVEWAY DETAILS

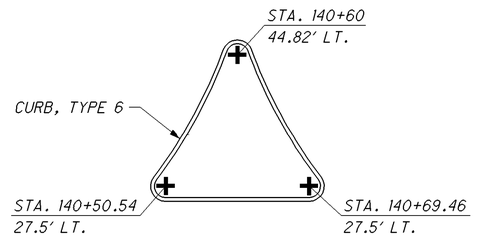
LIC-62-2.41

$TIME$
$DATE$
$FILE$



CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

CONCRETE TRAFFIC ISLAND DETAILS



HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED LMO
CHECKED KJG

COMMERCIAL DRIVE DETAILS
STA. 140+60 - U.S. 62

LIC-62-2.41

61
84

$TIME$
$DATE$
$FILE$

<u>GENERAL</u>

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 (2005) 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 MANAGER 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 ARE 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.

WHERE THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS REFER TO "ENGINEER" OR "DIRECTOR", THE PROJECT MANAGER IDENTIFIED FOR THIS WORK SHALL BE SUBSTITUTED.

<u>UNDERGROUND UTILITIES</u>

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY THE OHIO REVISED CODE SECTION 153.64.

ODOT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THESE PLANS. SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE VARIOUS ITEMS OF WORK. AT LEAST 48 HOURS BEFORE DIGGING, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALL THE OHIO UTILITIES PROTECTION SERVICE (OUPS), 800-362-2764, AND THE UTILITIES NAMED BELOW SO THEIR RESPECTIVE FACILITIES CAN BE MARKED PRIOR TO CONSTRUCTION

<u>PLAN AND SPECIFICATION COMPLIANCE</u>

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE REQUIREMENTS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2005), ALL SUPPLEMENTAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE STANDARD CONSTRUCTION DRAWINGS ISSUED BY ODOT. ITEM NUMBERS ARE ODOT REFERENCE SPECIFICATION ITEMS UNLESS OTHERWISE INDICATED.

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

(A) SPECIFICATIONS LISTED PER PLAN
(B) NEMA STANDARDS PUBLICATION NO. TS2-2003 (OR CURRENT NEMA ISSUE) AND/OR TS1-1989: SECTIONS 1, 2, 5, 6, 8, 11, 13 AND 14.
(C) 2005 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

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

<u>NEW SIGNAL ACTIVATION</u>

THE SIGNAL SHALL BE ACTIVATED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2005) AND STANDARD DRAWING MT-120.00. ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC

<u>PROJECT MANAGER OR PLAN CHANGES</u>

THE PROJECT MANAGER SHALL BE DESIGNATED BY ODOT. THE SIGNAL INSTALLATION WORK SHALL BE INSPECTED BY THE PROJECT MANAGER OR AN APPROVED REPRESENTATIVE. ANY CHANGES TO THESE PLANS SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO IMPLEMENTATION.

<u>GUARANTEE</u>

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 THE COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

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

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

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

<u>MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION</u>

THE CONTRACTOR SHALL PROVIDE ONE OR MORE CONTACT PERSONS WHO CAN RECEIVE ALL DEVICE OUT-OF-SERVICE CALLS THAT OCCUR PRIOR TO FINAL ACCEPTANCE OF THE SIGNAL. THE CONTRACTOR SHALL DISPATCH MAINTENANCE PERSONNEL TO CORRECT THE PROBLEM. THE CONTRACTOR SHALL PROVIDE THE PROJECT MANAGER WITH ADDRESSES AND PHONE NUMBERS OF THESE CONTACT PERSONS. A PERSON SHALL BE CONTINUOUSLY AVAILABLE TWENTY-FOUR (24) HOURS A DAY, SEVEN (7) DAYS A WEEK. THE CONTRACTOR SHALL PROVIDE MAINTENANCE SERVICE ENTIRELY WITH HIS PERSONNEL. ALL OUTAGES AND MALFUNCTIONS SHALL BE CORRECTED TO THE SATISFACTION OF THE PROJECT MANAGER WITHIN 2 HOURS AFTER THE CONTRACTOR'S CONTACT PERSON HAS BEEN NOTIFIED.

IN THE EVENT OF A SIGNAL POWER LOSS OTHER THAN AN ELECTRIC COMPANY GENERAL POWER OUTAGE, THE CONTRACTOR AT HIS/HER EXPENSE SHALL TAKE ACTION WITHIN 30 MINUTES TO PROVIDE POLICE OFFICERS TO DIRECT TRAFFIC UNTIL THE SIGNAL IS BACK IN PROPER OPERATION.

IN THE EVENT NEW SIGNAL EQUIPMENT OR MATERIALS ARE DAMAGED PRIOR TO ACCEPTANCE, SUCH DAMAGED EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE PROJECT MANAGER AND THE SIGNALS SHALL BE PLACED BACK IN SERVICE WITHIN 2 HOURS AFTER NOTIFICATION OF THE CONTRACTOR. WHERE OUTAGES OR DAMAGES ARE THE RESULT OF A VEHICULAR ACCIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COLLECTION OF COMPENSATION FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGES.

ODOT WILL BILL THE CONTRACTOR AND THE CONTRACTOR SHALL PAY FOR ALL POLICE SERVICES OR TRAFFIC MAINTENANCE BY THE CITY OR THOSE OF ANOTHER CONTRACTOR WHICH MAY BECOME NECESSARY WHEN THE CONTRACTOR FAILS TO PERFORM OR IS UNABLE TO RESPOND. IF CONTROL EQUIPMENT OR POLES ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO NEMA OPERATION WITHIN THE ALLOWED 2 HOUR TIME FRAME AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON AS POSSIBLE.

ANY WORK REQUIRED AS PART OF THIS NOTE SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

<u>CROSSINGS AND CONNECTIONS TO EXISTING PRIPES AND UTILITIES</u>

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENET 603 CONDUIT ITEM.

<u>UNDERDRAINS FOR PULL BOXES</u>

REFERENCE IS MADE TO THE STANDARD CONSTRUCTION DRAWINGS FOR DETAILS FOR DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET.

THE FOLLOWING QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 603 - 4" CONDUIT, TYPE E 280 FT.

<u>STRAIN POLE FOUNDATION ELEVATIONS</u>

ELEVATIONS SHOWN IN THE PLANS FOR STRAIN POLE FOUNDATIONS ARE FOR COMPUTATIONAL PURPOSES ONLY. THE ACTUAL ELEVATION OF THE FOUNDATION SHALL BE IN ACCORDANCE WITH SCD TC-21.20 PROVIDED THE EXISTING SLOPE IS LESS THAN 6:1.

AT LOCATIONS WHERE THE EXISTING SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF THE FOUNDATION, AS SHOWN IN SCD TC-21.20 SHALL APPLY TO THE LOW SIDE OF THE SLOPE. THE TOP OF THE FOUNDATION SHALL BE SET 2 INCHES ABOVE THE EXISTING SURFACE ON THE HIGH SIDE OF THE SLOPE. THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP.

<u>INSTALLATION LAYOUT</u>

THE TRAFFIC SIGNAL STRAIN POLES AND ALL OTHER STATIONED ITEMS SHALL BE LOCATED AND MARKED BY A PROFESSIONAL SURVEYOR USING THE STATION NUMBERS AND OFFSETS PROVIDED IN THESE PLANS. COSTS INCURRED FOR THIS SERVICE SHALL BE INCIDENTAL THE COST OF THE PROJECT.

<u>TRANSITION TO SIGNAL CONTROL</u>

THE CONTRACTOR SHALL FLASH THE NEW SIGNAL INSTALLATION FOR 10 CONSECUTIVE DAYS BEFORE BEGINNING CYCLE OPERATION. THE 10-DAY PERFORMANCE TEST IS DELAYED UNTIL THE COMPLETION OF THE 10-DAY FLASHING.

PAYMENT FOR THE TRANSITION TO SIGNAL CONTROL SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT BID PROCESS FOR THE VARIOUS SIGNAL ITEMS.

1/24/2008 10:06:02 AM
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ELECTRICAL INSPECTION NOTE
DEPARTMENT OF INDUSTRIAL RELATIONS, INSPECTION

THERE IS A RULE 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 RULE IS NOW BEING ENFORCED BY THE UTILITY COMPANIES AND THE OHIO DEPARTMENT OF INDUSTRIAL RELATIONS. THIS IS A NEW SITUATION FOR ODOT BECAUSE STATE INSPECTIONS ARE NOW BEING REQUIRED FOR TRAFFIC CONTROL DEVICES AND LIGHTING INSTALLATIONS.

THE COST OF THE ELECTRICAL INSPECTION SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE LIGHTING INSTALLATIONS OR TRAFFIC CONTROL DEVICES.

ITEM 625 - GROUND ROD, AS PER PLAN
IN ADDITION TO CMS ITEM 625.09, THIS ITEM SHALL CONSIST OF FURNISHING AND RUNNING OF A SEVEN STRAND #4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CABINET.
PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

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 CABLES 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" WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALI ACIDES 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 TAPE SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY 8" TO 12" BELOW 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 SYSTEMS, TERRA TAPE OR EQUAL, AS APPROVED BY THE ENGINEER. THIS ITEM SHALL BE PAID FOR PER LINEAR FEET OF ITEM 625 TRENCH, AS PER PLAN COMPLETE AND IN PLACE.

ITEM 630 - GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN
POSTS SHALL BE TYPE S AS DETAILED IN SCD TC-41.20 AND THE CONTRACTOR SHALL USE THE DRIVEN INSTALLATION METHOD.

ITEM 632 - POWER SERVICE, AS PER PLAN
ELECTRIC POWER SHALL BE OBTAINED FROM AMERICAN ELECTRIC POWER AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

IN ADDITION TO THE REQUIREMENT OF ITEM 632 POWER SERVICE, THE CONTRACTOR SHALL SUPPLY AND INSTALL AN ITEM 632 - 30' WOOD POLE AND A SECOND DISCONNECT SWITCH ON THE CONTROLLER CABINET AS DETAILED ON TRAFFIC THE SIGNAL PLAN (SHEETS 64 & 69C) AND IN ACCORDANCE WITH SCD TC-83.10. THE CONTRACTOR SHALL PROVIDE A WORK PAD AND ORIENT BOTH THE WORK PAD, METER, AND DISCONNECT SWITCH ENCLOSURE TO THE BACK SIDE OF THE WOOD POLE TO MINIMIZE THE VIEW OF SAID ITEMS FROM THE ROADWAY. ANY ADDITIONAL MESSENGER WIRE, ATTACHMENT EQUIPMENT NECESSARY FOR THE SERVICE CABLE CONNECTION BETWEEN THE WOOD POLE AND THE PROPOSED POWER UTILITY POLE SHALL BE CONSIDERED INCIDENTAL TO THIS PAY ITEM.

PAYMENT FOR ITEM 632 - POWER SERVICE, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE COMPLETE AND IN PLACE INCLUDING ALL ADDITIONAL SPECIFIED ITEMS AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, (BY TYPE), AS PER PLAN
ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, (BY TYPE), 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 EALL SIGNAL LENS TYPES]

MOUNTING HARDWARE:
THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
WHEN SIGNAL HEADS ARE SUSPENDED FROM SPAN WIRES OR MAST ARMS AND NOT RIGIDLY MOUNTED THEY SHALL BE PROVIDED WITH A PIVOT AND LOCK BALANCE ADJUSTER. 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 (ZNII). BALANCE ADJUSTERS SHALL ONLY BE USED WHERE NECESSARY.
BALANCE ADJUSTERS SHALL BE USED ON ONE-WAY HEADS.

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

ODOT DISTRICT #5
ATTN: BRIAN BOSCH
ADDRESS: 9600 JACKSONTOWN ROAD
P.O. BOX 306
JACKSONTOWN, OH 43030

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

ITEM 633 - CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN

THE 412C PROM MODULE FOR THE LOCAL CONTROLLER SHALL BE SUPPLIED WITHOUT CONTROLLER SOFTWARE TO THE ODOT DISTRICT OFFICE 14 DAYS IN ADVANCE OF WHEN THE SOFTWARE IS NEEDED. THE PROM MODULES SHALL BE CONFIGURED FOR WAPITI SOFTWARE AND INCLUDE A BLANK EPROM FOR PROGRAM INSTALLATION.
ODOT WILL INSTALL THE LOCAL CONTROLLER SOFTWARE PROGRAM. THE CONTRACTOR SHALL PICK UP THE PROM MODULES WITH THE INSTALLED SOFTWARE FROM DISTRICT.
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE THE RETRUNED PROM MODULES TO PROGRAM THE SIGNAL CONTROLLERS PER THE PLANS.

THE CONTRACTOR SHALL NOT REASSIGN THE DETECTOR INPUTS IN ORDER TO REDUCE THE NUMBER OF 2-CHANNEL DETECTOR UNITS SUPPLIED, BUT SHALL USE THE STANDARD CALTRANS INPUT FILE DESIGNATIONS.

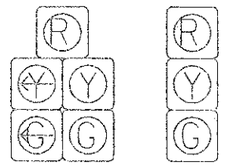
A GENERATOR POWER PANEL AND ENCLOSURE SHALL BE MOUNTED ON THE OUTSIDE OF THE UPPER SECTION OF THE CONTROLLER CABINET, AND THE SAME SIDE AS THE CIRCUIT BREAKERS. THE STANDARD DRAWING FOR THE GENERATOR POWER PANEL IS ON SHEET 69 OF THIS PLAN AND THE GENERATOR POWER PANEL SHALL MEET THOSE SPECIFICATIONS.

PAYMENT FOR ITEM 633 - CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE COMPLETE AND IN PLACE INCLUDING ALL SPARE PARTS IN THE CABINET AND CONNECTIONS TESTED AND ACCEPTED.

CALCULATED NBC CHECKED SDS

TRAFFIC GENERAL NOTES

LIC-62.41



NOTES:

-WOOD POLE AND SECOND DISCONNECT SWITCH TO BE FURNISHED UNDER PAY ITEM 632, POWER SERVICE, AS PER PLAN.

24" PULL BOX
STA. 11+24, 27' RT.

1-2" CONDUIT W/(3)-2/C
IN TRENCH=105'

18" PULL BOX
STA. 137+53, 36' LT.

1-2" CONDUIT W/(9)-2/C
1-2" CONDUIT W/ POWER CABLES
IN TRENCH=16'

TRAFFIC CONTROL CABINET
SECOND DISCONNECT SWITCH
TO BE MOUNTED ON CABINET,
LOCATED ON GENERATOR PANEL SIDE
STA. 137+55.9, 54.3' LT.
(FOUNDATION / WORKPAD PER
SCD TC-83.20, SHEET 2/2 FOR TYPE 332)

1-3" CONDUIT W/(3)-2/C, 725.04
JACKED=46'

24" PULL BOX
STA. 11+24, 23' LT.

24" PULL BOX
STA. 137+57.2, 51.8' LT.

1-2" CONDUIT W/(3)-2/C
1-2" CONDUIT W/(4)-7/C
1-2" CONDUIT W/ POWER/SERVICE CABLES
IN TRENCH=8'

POLE 'A' STRAIN POLE
STA. 137+63.9, 48.5' LT.

1-2" CONDUIT W/(16)-2/C
1-2" CONDUIT W/ POWER CABLES
IN TRENCH=47'

24" PULL BOX
STA. 137+98, 27' LT.

1-2" CONDUIT W/ POWER
CABLES, IN TRENCH=33'

1-2" CONDUIT W/(2)-2/C
IN TRENCH=202'

1-2" CONDUIT W/(1)-2/C
IN TRENCH=34'

18" PULL BOX
STA. 10+92, 29' LT.

18" PULL BOX
STA. 141+65, 27' LT.

18" PULL BOX
STA. 140+00, 27' LT.

1-2" CONDUIT W/(1)-2/C,
725.04,
IN TRENCH=165'

18" PULL BOX
STA. 132+70, 26' RT.

1-2" CONDUIT W/(1)-2/C
IN TRENCH=185'

18" PULL BOX
STA. 134+55, 25' RT.

1-2" CONDUIT W/(2)-2/C
IN TRENCH=202'

18" PULL BOX
STA. 136+57, 25' RT.

1-2" CONDUIT W/(3)-2/C
IN TRENCH=56'

18" PULL BOX
STA. 137+00, 45' RT.

1-2" CONDUIT W/(3)-2/C
IN TRENCH=6'

POLE 'B' STRAIN POLE
STA. 137+01.4, 50.3' RT.

1-3" CONDUIT
W/(3)-2/C, 725.04
JACKED=67'

24" PULL BOX
STA. 138+07, 40' RT.

1-2" CONDUIT W/(2)-2/C
IN TRENCH=68'

18" PULL BOX
STA. 8+70, 23' RT.

PROBABLE POWER SOURCE LOCATION,
ONCE UTILITY RELOCATES

AERIAL SERVICE CABLE, 5'

WOOD POLE, 30'
W/ METER & DISCONNECT SWITCH,
2" CONDUIT RISER
(LOCATE WOOD POLE AT THE SAME OFFSET &
WITHIN 5' OF RELOCATED UTILITY POLE)

RIGHT TURN LOOP
CONFIGURATION

57°

STOP BAR

LEGEND

- PULLBOX
- 3-SECTION SIGNAL
- 5-SECTION SIGNAL

HORIZONTAL
SCALE IN FEET
0 10 20 40

CALCULATED NBC
CHECKED SDS

TRAFFIC SIGNAL PLAN

LIC-62-2.41

64
84

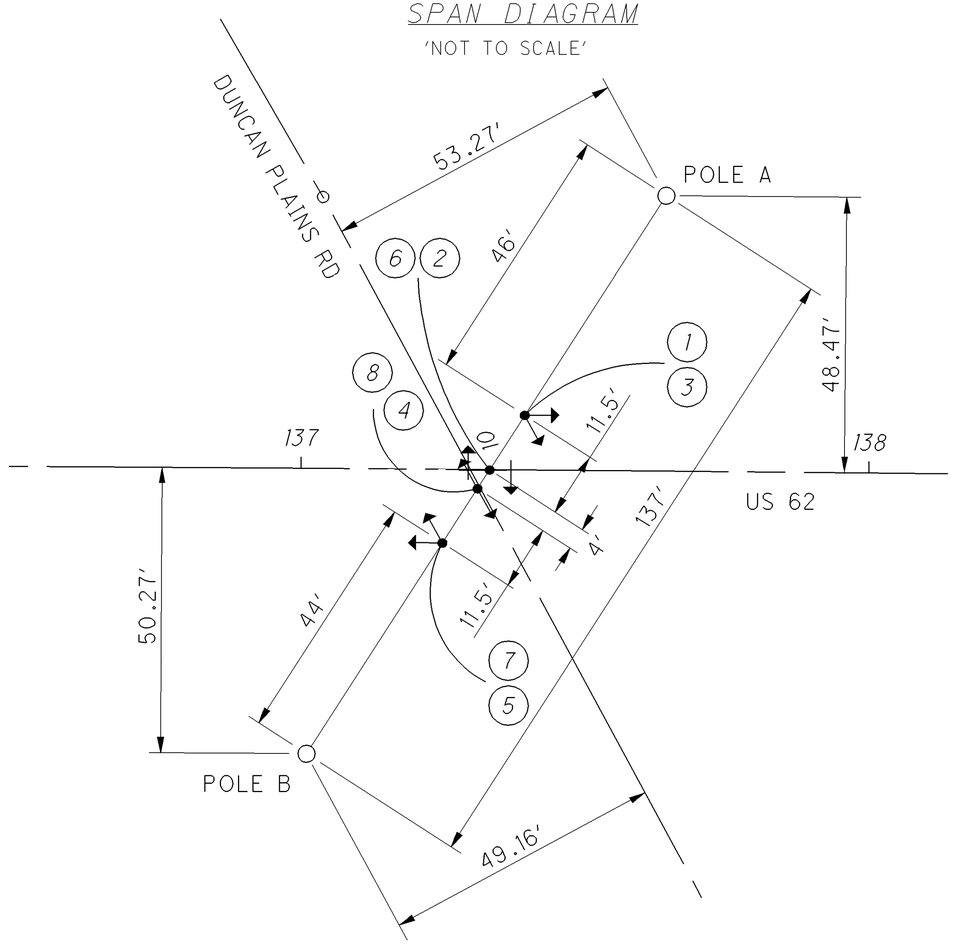
1/24/2023
16:06:46 AM
S:\PRODUCTION\PROJECTS\85374.089 ODOT - LIC-62-2.41\ROADWAY\SHEETS\LIC62-SIGNAL LAYOUT.DGN

FIELD WIRING HOOKUP CHART			
SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (WB)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
2 (WBLT)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
	~~Y~~	Ø1 Y	
	~~G~~	Ø1 G	
3 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
4 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
5 (EB)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
6 (EBLT)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
	~~Y~~	Ø5 Y	
	~~G~~	Ø5 G	
7 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	
8 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	

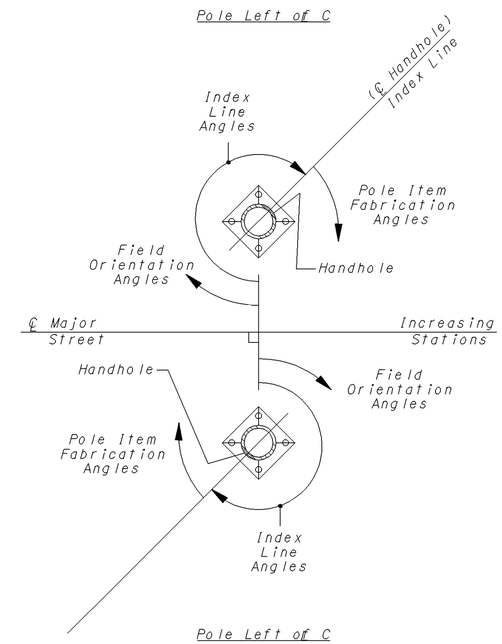
SIGNAL SUPPORT				FIELD ORIENTATION ANGLE								POLE FABRICATION ANGLE				
POLE	DESCRIPTION	STATION	OFFSET	INDEX LINE ANGLE	HAND HOLE ANGLE	BLIND COUPLING ANGLE	SPAN ANGLE(S)	TOP OF FOUNDATION ELEVATION	BLIND COUPLING SIZE	ATTACHMENT HEIGHT ELEVATION	CONDUIT ELL 2" DIAMETER					DISC. SWITCH & METER
A	TC-81.10, DESIGN 10, 32'	137+63.9	48.5' LT.	215°	0°	180°	32°	1115.7'	2"	1145.4'	115°					180°
B	TC-81.10, DESIGN 10, 32'	137+01.4	50.3' RT.	215°	0°		33°	1122.2'		1145.4'	340°					

SPAN DIAGRAM

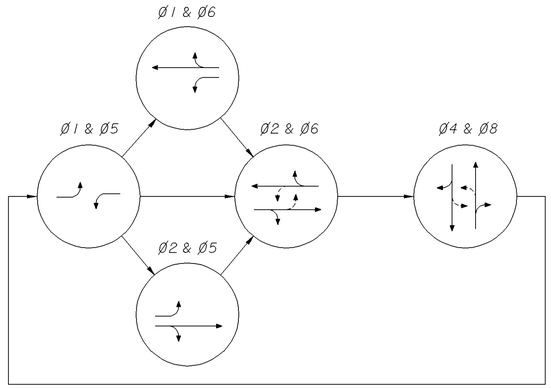
'NOT TO SCALE'



SIGNAL STRAIN POLE ORIENTATION DETAIL



PROPOSED PHASING DIAGRAM



VEHICLE LOOP DETECTOR							
LOOP #	LOCATION	SIZE	TYPE	# TURNS	DELAY	ASSOCIATED CONTROLLER PHASE	DESCRIPTION
L1	2' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	5 SEC	Ø5	EB LT
L2	200' BEHIND STOP LINE	6'X 6'	PRESENCE	4		Ø2	EB NEAR
L3	385' BEHIND STOP LINE	6'X 6'	PRESENCE	4		Ø2	EB FAR
L4	SPECIAL, SEE DETAILS SHEET 64	8'X 35'	PRESENCE	3	8 SEC	Ø4	SB 1
L5	8' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	5 SEC	Ø4	SB 2
L6	2' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	3 SEC	Ø4	SB LT
L7	2' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	5 SEC	Ø1	WB LT
L8	200' BEHIND STOP LINE	6'X 6'	PRESENCE	4		Ø6	WB NEAR
L9	365' BEHIND STOP LINE	6'X 6'	PRESENCE	4		Ø6	WB FAR
L10	SPECIAL, SEE DETAILS SHEET 64	8'X 35'	PRESENCE	3	8 SEC	Ø8	NB 1
L11	8' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	5 SEC	Ø8	NB 2
L12	2' IN FRONT OF STOP LINE	8'X 40'	PRESENCE	3	3 SEC	Ø8	NB LT

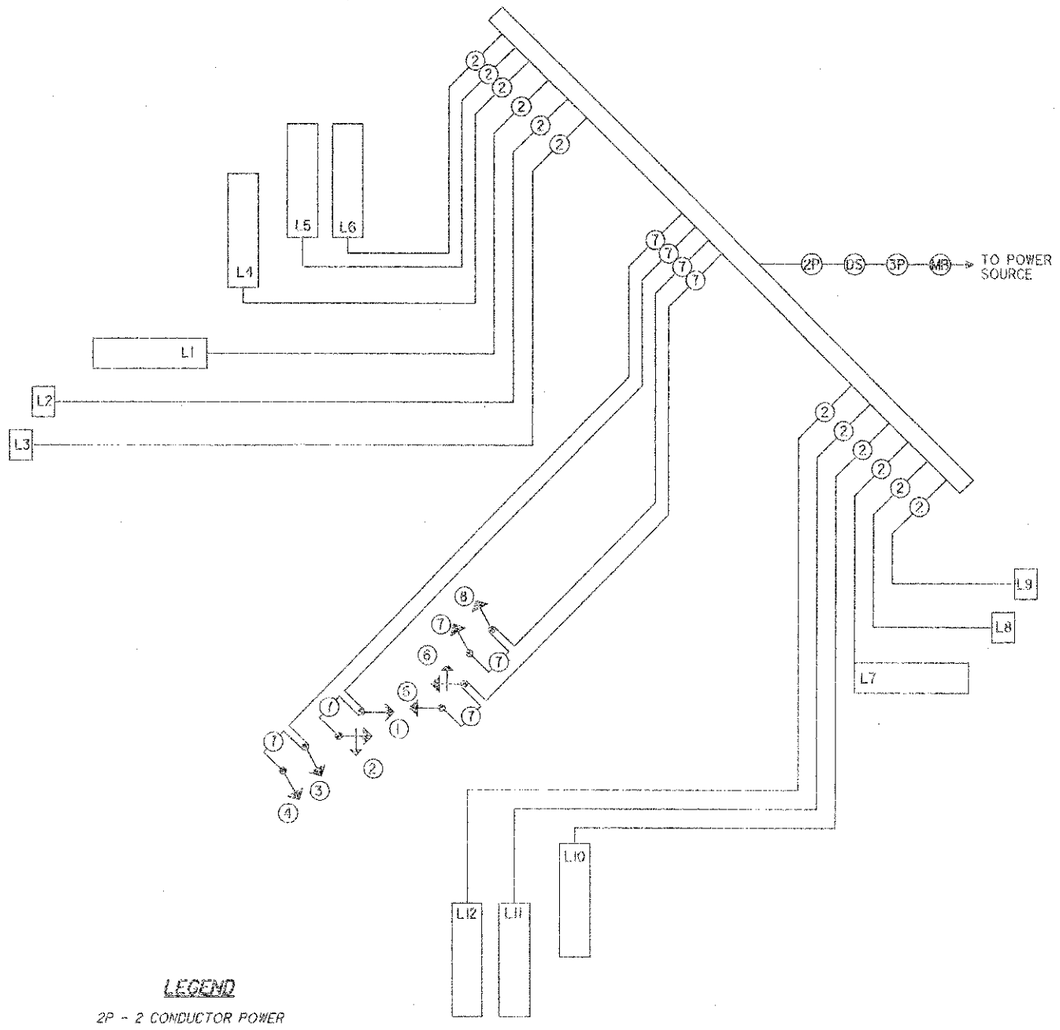
CALCULATED NBC CHECKED SDS

TRAFFIC SIGNAL DETAILS

LIC-62-2.41

$TIME$
$DATE$
$FILE$

WIRING DIAGRAM



LEGEND

2P - 2 CONDUCTOR POWER
3P - 3 CONDUCTOR SERVICE CABLE
DS - DISCONNECT SWITCH
MB - METER BOX

TRAFFIC SIGNAL SUBSUMMARY

ITEM	ITEM EXT.	STP	SIDE COUNTY	TOTAL	UNIT	ITEM DESCRIPTION	SEE SHEET NO.
625	25400	165		165	FT	CONDUIT, 2", 725.04	
625	25402	856		856	FT	CONDUIT, 2", 725.05	
625	25900	113		113	FT	CONDUIT, 3", JACKED OR DRILLED UNDER PAVEMENT	
625	29003	1127		1127	FT	TRENCH, 24" DEEP, AS PER PLAN	63
625	30700	9		9	EACH	PULL BOX, 725.08, 18"	
625	30706	5		5	EACH	PULL BOX, 725.08, 24"	
625	32001	3		3	EACH	GROUND ROD, AS PER PLAN	63
632	05021	3		3	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, AS PER PLAN	63
632	05101	1		1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 2-WAY, AS PER PLAN	63
632	25000	8		8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
632	26500	10	2	12	EACH	DETECTOR LOOP	
632	30200	114		114	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER W/ ACCESSORIES	
632	40700	568		568	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	64000	2		2	EACH	STRAIN POLE FOUNDATION	
632	65200	3059	417	3476	FT	LOOP DETECTOR LEAD-IN CABLE	
632	67200	200		200	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
632	69800	40		40	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	70001	1		1	EACH	POWER SERVICE, AS PER PLAN	63
632	70400	1		1	EACH	CONDUIT RISER, 2" DIAMETER	
632	83000	2		2	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10	
633	01601	1		1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN	63
633	67000	1		1	EACH	CABINET RISER	
633	67100	1		1	EACH	CABINET FOUNDATION	
633	67200	2		2	EACH	CONTROLLER WORK PAD	
633	75000	1		1	EACH	UNINTERUPTIBLE POWER SUPPLY (UPS), 1000 WATT	

CALCULATED NBC
CHECKED SDS

TRAFFIC SIGNAL DETAILS

LIC-62-2.47

TABLE 1 - PHASE FUNCTION, PHASE TIMING

0 + Key									
FUNCTION	KEY	PHASE NUMBER USE CAD LIGHTS							
		1	2	3	4	5	6	7	8
Vehicle Recall	0		X				X		
Ped. Recall	1								
Red Lock	2								
Yellow Lock	3								
Permit Phase	4	X	X			X	X	X		X
Ped. Phase	5								
Lead Phase	6	X		X		X		X	
Double Entry	7								
Seq. Timing	8								
Start-Up Green	9		X				X		
Overlap A	A								
Overlap B	B								
Overlap C	C								
Overlap D	D								
Exclusive Phase	E								
Simultaneous Gap	F								

Phase + Key									
FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8
MAX. I	0	15	40		25	15	40		25
MAX. II/HFDW	1	15	40		25	15	40		25
Walk	2								
Flash DW	3								
Maximum Initial	4		25				25		
Minimum Green	5	8	15		10	8	15		10
Time Before Reduc.	6								
Time to Reduce	7								
Gap Observe	8	///	///	///	///	///	///	///	///
Passage	9	3	4		3	3	4		3
Minimum Gap	A								
Added Actuation	B		1				1		
Yellow	C	4	4		4	4	4		4
Red Clear	D	1	1		1	1	1		1
Red Revert	E								
Walk II	F								

TABLE 2 - MISCELLANEOUS

9 + key		
FUNCTION	K	VALUE
Short Power Down	0	3
Long Power Down	1	3
RR Delay Type	6	
Ped. Inhibit	7	
OLA Green	8	
OLA Yellow	9	
OLB Green	A	
OLB Yellow	B	
OLC Green	C	
OLC Yellow	D	
OLD Green	E	
OLD Yellow	F	

C + F + key									
FUNCTION	K	V							
Page ID	0								
OLA Red	4	15							
OLB Red	5								
OLC Red	6		Phase No. Use CAD Lts.						
OLD Red	7								
			1	2	3	4	5	6	7	8
Overlap E	8									
Overlap F	9									
Red Rest	A									
Maximum Recall	B									
Flash Green	C									
Flash Walk	D									
Advance Walk	E									
Restrictive Phase	F									

TABLE 3

E + Key		
FUNCTION	K	V
OL Red Revert	8	
RR Delay	9	
RR Clear	A	

		Phase No. Use CAD Lts.							
		1	2	3	4	5	6	7	8
RR Clear Phase	B								
RR Permit	C								
RR OL Permit	D								
NEMA Hold Phase	E								

C+ Key										
FUNCTION	K	V	Phase No. Use CAD Lts.							
Trigs on Flash	8	2								
			1	2	3	4	5	6	7	8
Start Up Yellow	9									
Handicap Ped	E									

TABLE 4 - MODEL 332 CABINET DETECTOR MAP

The 332 cabinet has two input files: the top file is I, the bottom file is J.

D+ column + key							
DETECTOR TYPE		DELAY				CARRYOVER	
COLUMN NO.		2		3		4	5
KEY	CHANNEL	PHASE	TIME	PHASE	TIME	PHASE	TIME	PHASE	TIME
0	------ 1	1 E/C		5 E/C		1 E/C		5 E/C	
1	Upper 9	1 E/C	5.0	5 E/C	5.0	1 E/C		5 E/C	
2	Upper 2	2 E/C		6 E/C		2 E/C		6 E/C	
3	Lower 2	2 E/C		6 E/C		2 E/C		6 E/C	
4	Upper 3	2 E/C		6 E/C		2 E/C		6 E/C	
5	Lower 3	////	////	////	////	2 Ext.		6 Ext.	
6	------ 4	2 Call		6 Call		////	////	////	////
7	------ 5	3 E/C		7 E/C		3 E/C		7 E/C	
8	Lower 9	3 E/C		7 E/C		3 E/C		7 E/C	
9	Upper 6	4 E/C	8.0	8 E/C	8.0	4 E/C		8 E/C	
A	Lower 6	4 E/C	5.0	8 E/C	5.0	4 E/C		8 E/C	
B	Upper 7	4 E/C	3.0	8 E/C	3.0	4 E/C		8 E/C	
C	Lower 7	////	////	////	////	4 Ext.		8 Ext.	
D	------ 8	4 Call		8 Call		////	////	////	////
INPUT FILE		I		J		I		J	

E/C = Extend and Call Ext. = Extend Only

D + 9 + 4 + 0	DETECTOR FAIL ON	
D + 9 + 4 + 1	DETECTOR FAIL OFF	

TABLE 5 - TIME CLOCK CONTROL

A + CODE										
EVENT NO.	S 1	M 2	T 3	W 4	T 5	F 6	S 7	HR	MIN	FUNC
	80							81	82	83
	84							85	86	87
	88							89	8A	8B
	8C							8D	8E	8F
	90							91	92	93
	94							95	96	97
	98							99	9A	9B
	9C							9D	9E	9F
	A0							A1	A2	A3
	A4							A5	A6	A7

TABLE 6

B +0 + Key		
FUNCTION	K	V
Mode (0 - 4)	4	
Master (0 = OFF)	5	

		Phase No. Use CAD Lts.							
		1	2	3	4	5	6	7	8
Future	C								
NEMA CNA Phase	D								
Adv Warning Phase	E								
MRI Phase	F								

D+ Key 1 + Key 2		
FUNCTION	K	V
Floating Ped	2E	
ID Number	2F	
No Coord Ped Recall	3E	
Rest in Walk	3F	
Adv Warn EoG	4E	
Adv Warn SoG	4F	
RR Red Clear	5E	
RR Clear Color	5F	

TABLE 7 - COORDINATION TIMING

B + Plan + Key					
FUNCTION	K	PLAN 1	2	3	4
Cycle Length	0				
Forceoff 01	1				
Forceoff 02	2				
Forceoff 03	3				
Forceoff 04	4				
Forceoff 05	5				
Forceoff 06	6				
Forceoff 07	7				
Forceoff 08	8				
Offset	9				
Perm. Length	A				
Max Dwell	B				

FUNCTION	K	1	2	3	4	5	6	7	8
PLAN 1									
Lead Ph. S	C								
Coord. Ph. S	D								
Perm. 2 Ph. S	E								
Min. Recall	F								
PLAN 2									
Lead Ph. S	C								
Coord. Ph. S	D								
Perm. 2 Ph. S	E								
Min. Recall	F								
PLAN 3									
Lead Ph. S	C								
Coord. Ph. S	D								
Perm. 2 Ph. S	E								
Min. Recall	F								
PLAN 4									
Lead Ph. S	C								
Coord. Ph. S	D								
Perm. 2 Ph. S	E								
Min. Recall	F								

Phase No. Use CAD Lts.

TABLE 8

B +A + Key		
FUNCTION	K	V
Perm. 2 P1	9	
Perm. 2 P2	A	
Perm. 2 P3	B	

		Phase No. Use CAD Lts.							
		1	2	3	4	5	6	7	8
Flash Yellow	C								
Flash Circuit	D								
TOD/DOW Ped	E								
OLB Switchpack	F								

B +B + Key		
FUNCTION	K	V
Perm. 2 P4	9	
Perm. 2 P5	A	
Perm. 2 P6	B	

		Phase No. Use CAD Lts.							
		1	2	3	4	5	6	7	8
OL Flash Yel.	C								
OL Flash Clear	D								
TOO/DOW Ped	E								
OLC Switchpack	F								

B +C + Key		
FUNCTION	K	V
Perm. 2 P7	9	
Perm. 2 P8	A	
Perm. 2 P9	B	

		Phase No. Use CAD Lts.							
		1	2	3	4	5	6	7	8
Coord Max	C								
TOO Red Rest	D								
OLA Switchpack	E								
OLD Switchpack	F								

TABLE 9 - INPUT REASSIGNMENT

A+ 4 + Key		
CI PIN	K	CODE
39	0	
40	1	
41	2	
42	3	
43	4	
44	5	
45	6	
46	7	
47	8	
48	9	
49	A	
50	B	
51	C	
52	D	
53	E	
54	F	

A+ 5 + Key		
CI PIN	K	CODE
55	0	
56	1	
57	2	
58	3	
59	4	
60	5	
61	6	
62	7	
	8	
	9	
	A	
	B	
63	C	
64	D	
65	E	
66	F	

A+ 6 + Key		
CI PIN	K	CODE
67	0	
68	1	
69	2	
70	3	
71	4	
72	5	
73	6	
74	7	
75	8	
76	9	
77	A	
78	B	
79	C	
80	D	
81	E	
82	F	

TABLE 10 - OUTPUT REASSIGNMENT

A+ 0 + Key		
FUNCTION	K	CODE
04 D/W	0	
04 WALK	1	
04 RED	2	
04 YEL	3	
04 GRN	4	
03 RED	5	
03 YEL	6	
03 GRN	7	
02 D/W	8	
02 WALK	9	
02 RED	A	
02 YEL	B	
02 GRN	C	
01 RED	D	
01 YEL	E	
01 GRN	F	

A+ 1 + Key		
FUNCTION	K	CODE
08 D/W	0	
08 WALK	1	
08 RED	2	
08 YEL	3	
08 GRN	4	
07 RED	5	
07 YEL	6	
07 GRN	7	
06 D/W	8	
06 WALK	9	
06 RED	A	
06 YEL	B	
06 GRN	C	
05 RED	D	
05 YEL	E	
05 GRN	F	

A+ 2 + Key		
FUNCTION	K	CODE
02 PED Y	0	
06 PED Y	1	
04 PED Y	2	
08 PED Y	3	
03 PED Y	4	
01 PED Y	5	
FLASH	6	
WATCHDOG	7	
03 D/W	8	
03 WALK	9	
OLD RED	A	
OLD YEL	B	
OLD GRN	C	
OLC RED	D	
OLC YEL	E	
OLC GRN	F	

A+ 3 + Key		
FUNCTION	K	CODE
01 D/W	0	
01 WALK	1	
OLB RED	2	
OLB YEL	3	
OLB GRN	4	
OLA RED	5	
OLA YEL	6	
OLA GRN	7	
	8	
SD	9	
LTT	A	2

TABLE 11 - EXTENDED OUTPUT REASSIGNMENT

D+ B + 0 + Key		
FUNCTION	K	V
05 D/W	0	
05 WALK	1	
OLL RED	2	
OLL YELLOW	3	
OLL GREEN	4	
OLK RED	5	
OLK YELLOW	6	
OLK GREEN	7	
07 D/W	8	
07 WALK	9	
OLJ RED	A	
OLJ YELLOW	B	
OLJ GREEN	C	
OLH RED	D	
OLH YELLOW	E	
OLH GREEN	F	

D+ B + 1 + Key		
FUNCTION	K	V
OLE GREEN	0	
OLF GREEN	1	
OLE YELLOW	2	
OLF YELLOW	3	
ADV WARNING	4	
RR FL YELLOW	5	
DET. RESET	6	
RR ON	7	

D+ B + 2 + Key		
FUNCTION	K	V
CYCLE 2	0	
CYCLE 3	1	
OFFSET 1	2	
OFFSET 2	3	
OFFSET 3	4	
---------	5	
FREE	6	
FLASH	7	

TABLE 12 - PED. PERMISSIVE

E + F + Key		
FUNCTION	K	V
RR MAX II	0	
PED PERM PI 1	1	
PED PERM PI 2	2	
PED PERM PI 3	3	
PED PERM PI 4	4	
PED PERM PI 5	5	
PED PERM PI 6	6	
PED PERM PI 7	7	
PED PERM PI 8	8	
PED PERM PI 9	9	

TABLE 14 - COMMAND BOX

KEYSTROKES
D + 9 +Key1 + Key2

K1 = 8	
K2	V
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

K1 = 9	
K2	V
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

TABLE 15 - COMMAND BOX OUTPUT

D +B + 3 + Key		
FUNCTION	K	V
CB OUTPUT #1	0	
CB OUTPUT #2	1	
CB OUTPUT #3	2	
CB OUTPUT #4	3	
CB OUTPUT #5	4	
CB OUTPUT #6	5	
CB OUTPUT #7	6	
CB OUTPUT #8	7	
CB FLSH OUTPUT #9	8	
CB FLSH OUTPUT #10	9	
CB FLSH OUTPUT #11	A	
CB FLSH OUTPUT #12	B	

CALCULATED NBC CHECKED SDS

WAPITI SOFTWARE INTERSECTION TIMING
332 CABINET

LIC-62-2.41

$TIME$
$DATE$
$FILE$

INPUT FILE INFORMATION FOR THE 332 CABINET (rev. 05-26-99)

UPPER INPUT FILE (File = I)

UPPER CHANNEL															
	Phase Function	1 Ext-Call L-7	2 Ext-Call L-2	2 Ext-Call	2 Call	3 Ext-Call	4 Ext-Call L-4	4 Ext-Call L-6	4 Call	1 Ext-Call	Spare	Manual Control Adv.	2 PED	6 PED	Flash
	Keystroke for Delay	D-2-0	D-2-2	D-2-4	D-2-6	D-2-7	D-2-9	D-2-B	D-2-D	D-2-1					
	Keystroke for Extension	D-4-0 (5 sec.)	D-4-2	D-4-4	---	D-4-7	D-4-9 (8 sec.)	D-4-B (3 sec.)	---	D-4-1					
	Detector Log No.	1 (2 ch.)	5	---	---	2 (2 ch.)	7	---	---	---					
	Failed Detector ID No.	1 (2 ch.)	9	11	13 (2 ch.)	3 (2 ch)	14	16	18 (2 ch)	2					
	C1 Pin Number	56	39	63	47	58	41	65	49	60		80	67	68	81
	Field Terminals	1-D,E	2-D,E	3-D,E	4-D,E	5-D,E	6-D,E	7-D,E	8-D,E	9-D,E	10-D,E	11-D,E	12-D,E	13-D,E	14-D,E
	SLOT NUMBER	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
LOWER CHANNEL															
	Phase Function	1 Ext-Call	2 Ext-Call L-3	2 Ext	2 Call	3 Ext-Call	4 Ext-Call L-5	4 Ext	4 Call	3 Ext-Call	Spare	Adv. Enable	4 PED	8 PED	Stop
	Keystroke for Delay	D-2-0	D-2-3	---	D-2-6	D-2-7	D-2-A	---	D-2-D	D-2-8					
	Keystroke for Extension	D-4-0	D-4-3	D-4-5	---	D-4-7	D-4-A (5 sec.)	D-4-C	---	D-4-8					
	Detector Log No.	1 (2 ch.)	6	---	---	2 (2 ch.)	8	---	---	---					
	Failed Detector ID No.	1 (2 ch.)	10	12	13 (2 ch.)	3 (2 ch)	15	17	18 (2 ch)	4					
	C1 Pin Number	56	43	76	47	58	45	78	49	62		53	69	70	82
	Field Terminals	1-J,K	2-J,K	3-J,K	4-J,K	5-J,K	6-J,K	7-J,K	8-J,K	9-J,K	10-J,K	11-J,K	12-J,K	13-J,K	14-J,K

LOWER INPUT FILE (File = J)

UPPER CHANNEL															
	Phase Function	5 Ext-Call L-1	6 Ext-Call L-8	6 Ext-Call	6 Call	7 Ext-Call	8 Ext-Call L-10	8 Ext-Call L-12	8 Call	5 Ext-Call	Spare	Spare	EV - A	EV - B	RR - 1
	Keystroke for Delay	D-3-0	D-3-2	D-3-4	D-3-6	D-3-7	D-3-9	D-3-B	D-3-D	D-3-1					
	Keystroke for Extension	D-5-0 (5 sec.)	D-5-2	D-5-4	---	D-5-7	D-5-9 (8 sec.)	D-5-B (3 sec.)	---	D-5-1					
	Detector Log No.	3 (2 ch.)	9	---	---	4 (2 ch.)	11	---	---	---					
	Failed Detector ID No.	5 (2 ch.)	19	21	23 (2 ch)	7 (2 ch)	24	26	28 (2 ch)	6					
	C1 Pin Number	55	40	64	48	57	42	66	50	59		54	71	72	51
	Field Terminals	1-D,E	2-D,E	3-D,E	4-D,E	5-D,E	6-D,E	7-D,E	8-D,E	9-D,E	10-D,E	11-D,E	12-D,E	13-D,E	14-D,E
	SLOT NUMBER	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
LOWER CHANNEL															
	Phase Function	5 Ext-Call	6 Ext-Call L-9	6 Ext	6 Call	7 Ext-Call	8 Ext-Call L-11	8 Ext	8 Call	7 Ext-Call	Spare	Spare	EV - C	EV - D	RR - 2
	Keystroke for Delay	D-3-0	D-3-3	---	D-3-6	D-3-7	D-3-A	---	D-3-D	D-3-8					
	Keystroke for Extension	D-5-0	D-5-3	D-5-5	---	D-5-7	D-5-A (5 sec.)	D-5-C	---	D-5-8					
	Detector Log No.	3 (2 ch.)	10	---	---	4 (2 ch.)	12	---	---	---					
	Failed Detector ID No.	5 (2 ch.)	20	22	23 (2 ch)	7 (2 ch)	25	27	28 (2 ch)	8					
	C1 Pin Number	55	44	77	48	57	46	79	50	61		75	73	74	52
	Field Terminals	1-J,K	2-J,K	3-J,K	4-J,K	5-J,K	6-J,K	7-J,K	8-J,K	9-J,K	10-J,K	11-J,K	12-J,K	13-J,K	14-J,K

$TIME$
$DATE$
$FILE$

OFFICE OF TRAFFIC ENGINEERING

DESIGNED | REVIEWED
REVISION DATE 5/26/99 | CHECKED
PIS NUMBER

INFORMATION FILE FOR THE 332 CABINET

INPUT FILE INFORMATION

LIC-62-2.41

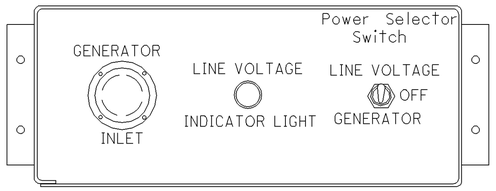
MATERIAL SPECIFICATIONS FOR GENERATOR POWER PANEL EQUIPMENT

GENERATOR INLET --- The inlet shall be 30 amp, 125/250V, locking, four (4) wire grounding and meet the NEMA configuration number L14-30-P 30A 125/250V specification. The inlet shall be a Hubbell catalog #2715.

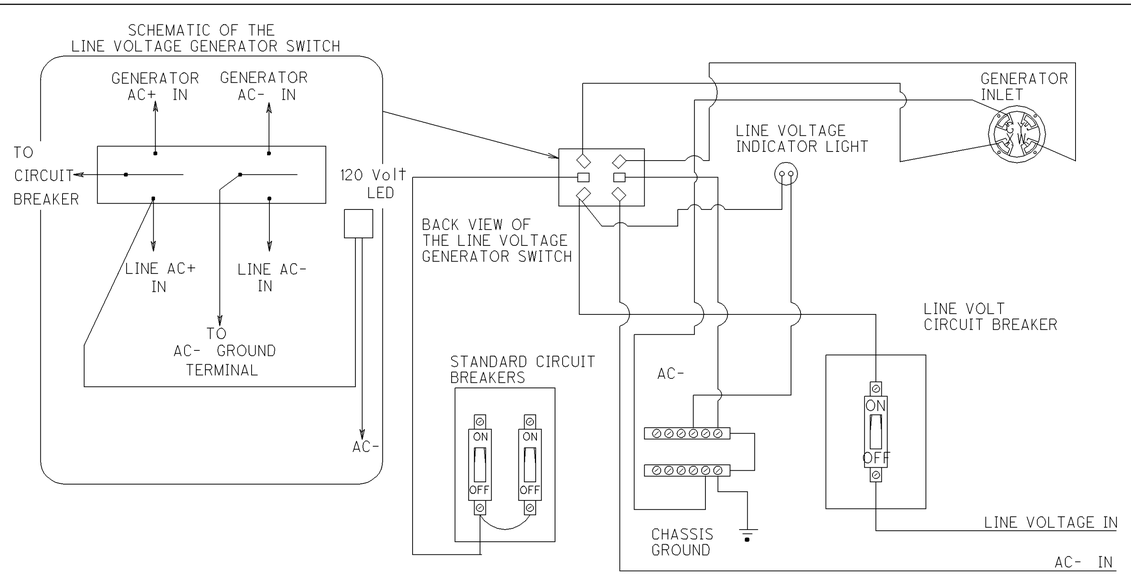
LINE VOLTAGE GENERATOR SWITCH --- The switch shall be 30 amp, 125/250V AC, two (2) pole, three (3) position (On, Off, On). The switch shall be a Hubbell catalog #1388.

LINE VOLTAGE INDICATOR LIGHT --- The indicator light shall be a 125V AC light emitting diode with a red lens.

LINE VOLTAGE CIRCUIT BREAKER --- The circuit breaker shall be single pole single throw and a minimum of 30 amps. The amperage shall be increased to accomodate greater loads, if necessary. The gauge of the power cable shall be of proper size per the N.E.C.

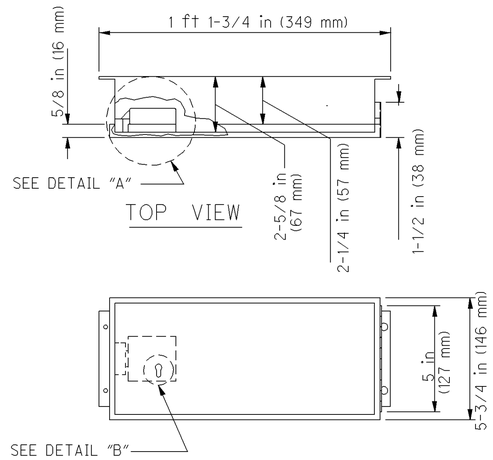


FRONT VIEW OF GENERATOR POWER PANEL



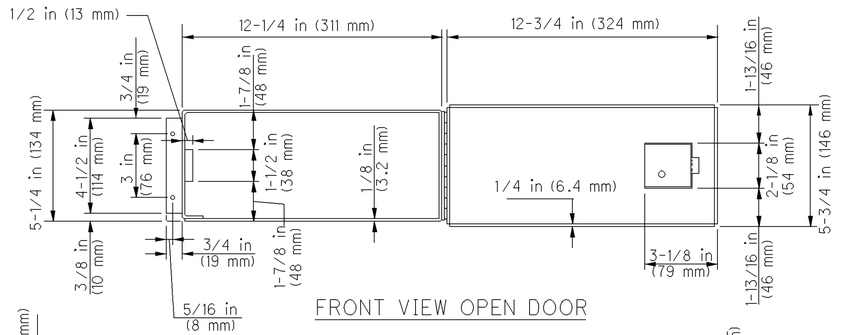
ELECTRICAL HOOKUP DETAIL FOR THE GENERATOR POWER PANEL

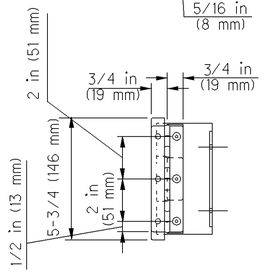
GENERATOR POWER PANEL ENCLOSURE

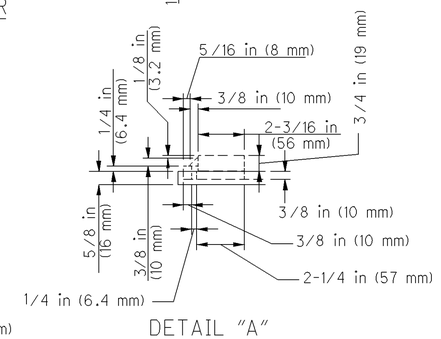


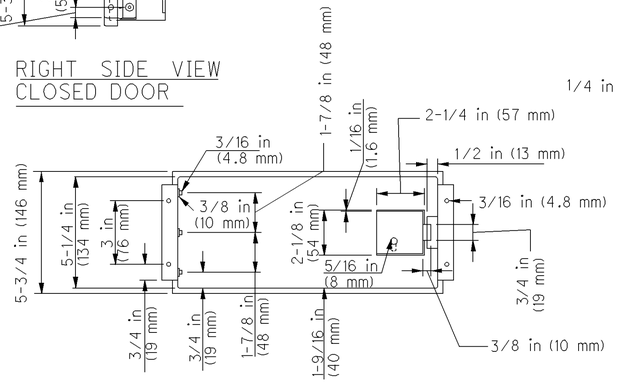
NOTES:

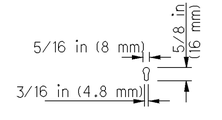
1. The enclosure shall be constructed Of 1/8 inch (3.2) thick aluminum.
2. The lock shall be the standard police door type, keyed with the standard flasher door skeleton key.
3. The door shall be sealed with a foam rubber gasket to prevent moisture from entering the enclosure.
4. The enclosure shall be mounted onto the outside of the controller cabinet with non-accessible bolts and sealed with a high quality silicon caulk at all surfaces touching the cabinet.
5. The hinge shall be of stainless steel or equivalent corrosive-resistant material.
6. All metric dimensions in parentheses are in millimeters unless otherwise noted.











OFFICE OF TRAFFIC ENGINEERING

DESIGNED | REVIEWED LAM

REVISION DATE 11/27/06 | CHECKED

PIS NUMBER 203010

PLAN INSERT SHEET

GENERATOR POWER PANEL

LIC-62-2.41

1 / 1

69 / 84

$TIME$

$DATE$ $FILE$

<u>ITEM 632, SIGNALIZATION MISC.: COMBINATION SIGNAL SUPPORT (BY DESIGN) ASSEMBLY</u>

THE TRAFFIC SUPPORT ASSEMBLY SHALL CONSIST OF THE FOLLOWING ITEMS AND DESIGN FEATURES. ALL DESIGN CONFIGURATIONS SHALL BE BASED OFF THE SIGNAL PLAN, SIGNAL POLE DATA TABLE AND TRAFFIC SIGNAL DETAILS:

- -COMBINATION SIGNAL SUPPORT WITH A 16 POINT SHARP FLUTE POLE RELIEF
- -DUAL MAST ARM ASSEMBLES
- -STEEL MONO TUBE LUMINAIRE BRACKETS
- -INDIVIDUAL DECORATIVE ANCHOR BOLT NUT COVERS
- -REMOVABLE SHIKRA DECORATIVE POLE CAP

ALL SIGNAL CABLES SHALL BE RUN INSIDE THE POLES AND ARMS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ATTACHMENTS OR CONNECTIONS TO THE POLES. ADDITIONAL WIRING HOLES IN THE POLE SHALL BE DRILLED, REAMED, OR HOLE SAWED. FLAME CUTTING (OXYACETYLENE OR ELECTRICAL ARC) WILL NOT BE ACCEPTED. ALL CUT EDGES OR OTHER DEFECTS IN THE ZINC COATING SHALL BE CLEANED AND COVERED WITH TWO COATS OF ZINC RICH REPAIR PAINT MATCHING THE FACTORY FINISH. BRACKETS AND APPURTENANCES SHALL BE SECURELY ATTACHED WITH STAINLESS STEEL BANDS OR STAINLESS STEEL SCREWS OF SUFFICIENT SIZE FOR THE INTENDED LOADING. STAINLESS STEEL BANDING MAY BE USED ONLY WHERE SPECIFICALLY AUTHORIZED BY THESE PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. ALL BANDING, WHERE USED, SHALL BE FACTORY PAINTED TO MATCH THE SIGNAL SUPPORTS.

THE MAST ARM STRUCTURE, BRACKET AND PEDESTAL SPECIFICATIONS ARE MINIMUM STANDARDS THAT ALL MATERIALS MUST MEET OR EXCEED. ODOT - DISTRICT 5 SHALL BE THE SOLE ENTITY TO DETERMINE IF THE PRODUCT SUPPLIED BY A MANUFACTURER MEETS OR EXCEEDS THE INTENT OF THESE SPECIFICATIONS. REQUESTS FOR CLARIFICATION OF THESE SPECIFICATIONS SHALL BE ADDRESSED TO THE DISTRICT'S TRAFFIC ENGINEER AT (740) 323-5182.

THE MAST ARM STRUCTURES, LUMINAIRE BRACKETS, AND RELATED ITEMS SHALL BE MANUFACTURED BY VALMONT INDUSTRIES ONLY.

DESIGN CRITERIA

ALL SINGLE-ARM AND DOUBLE-ARM SIGNAL MAST ARM POLE ASSEMBLIES SHALL BE DESIGNED TO SUPPORT THE LOADING AS SHOWN ON THE TYPICAL SHEETS AND THE GIVEN LOADING AS SHOWN ON THE INDIVIDUAL INTERSECTION LAYOUT SHEETS. THE STRUCTURAL INTEGRITY OF ALL PRODUCTS SHALL TAKE PRECEDENCE OVER STATED DESIGN DIMENSIONS IF THESE DIMENSIONS IN THE OPINION OF THE MANUFACTURER NEED TO BE INCREASED FOR THAT MANUFACTURER'S PRODUCT TO MEET THE REQUIRED DESIGN LOADING REQUIREMENTS. THE MANUFACTURER SHALL SUBMIT DESIGN CHANGES TO THE PROJECT ENGINEER FOR EVALUATION AND APPROVAL. THE STATED DIMENSIONS THAT ARE IN THESE PLANS ARE SHOWN TO ALLOW FLEXIBILITY IN FUTURE PART REPLACEMENTS AND TO CREATE A STANDARD FOR THE INTERCHANGEABILITY OF PARTS WITHIN ODOT - DISTRICT 5. COSTS ASSOCIATED WITH ANY REQUIREMENT OF THESE SPECIFICATIONS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE ITEM.

MAST ARM STRUCTURES SHALL BE DESIGNED ACCORDING TO THE "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1994, AASHTO (AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS). THE DESIGN SHALL BE SUCH THAT THE MAST ARM STRUCTURE WILL SUPPORT THE LOADING AS DEPICTED IN THESE PLANS. A 90 MPH WIND LOAD FACTOR SHALL BE INCORPORATED IN THE DESIGN.

THE MAST ARM POLE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS INDICATING THE EQUIVALENT MAXIMUM ARM END LOADING AT FAILURE FOR EACH DIFFERENT MAST ARM LENGTH BASED ON SQUARE FOOT OF AREA AND WEIGHT FOR EACH ARM. THE MAXIMUM LOADING DATA SHALL INCLUDE VALUES BASED ON SQUARE FOOTAGE OF AREA (CALCULATED AS IF ALL ATTACHMENTS WERE RIGIDLY MOUNTED, 4.7 SQ. FT. FOR SIGNALS AND 7.5 SQ. FT. FOR SIGNS) AND THE ALLOWABLE WEIGHT FOR ALL ATTACHED OBJECTS ON EACH ARM. THE END OF ARM MAXIMUM VERTICAL AND HORIZONTAL FORCE APPLIED AT FAILURE OF THE ARM SHOULD BE CLEARLY STATED.

THE MAST ARM POLE ASSEMBLY, AND THE MAST ARM ASSEMBLY SHALL BE MADE BY THE SAME MANUFACTURER.

ALL PRE-DRILLED HOLES FOR ALL ITEMS SHALL BE DEBURRED AND FREE OF ALL SHARP EDGES. ALL OUTSIDE WELDS ON MAST ARMS SHALL BE ROLLED OR GROUND SMOOTH. ALL INSIDE WELDS ON MAST ARM STRUCTURES SHALL BE VOID OF SHARP EDGES.

ANY STRUCTURAL FASTENER (3/4" OR GREATER) SHALL BE GALVANIZED PER ASTM 153 AND SHALL BE MADE OF HIGH STRENGTH CARBON STEEL. ANY OTHER FASTENER SHALL BE STAINLESS STEEL. ALL VISIBLE FASTENERS SHALL MATCH THE COATING OF THE STRUCTURE.

THE POLE SHAFT ASSEMBLY AND THE MAST ARM ASSEMBLY SHALL BE GALVANIZED AND THEN EITHER POWDER-COATED OR FINISHED WITH A WET PAINT PROCESS. ALL PAINTING SHALL BE PERFORMED UNDER CONTROLLED ENVIRONMENTAL CONDITIONS, AND IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION, MATERIAL HANDLING, AND APPLICATION. THE TOP FINISH COAT OF PAINT SHALL BE VALMONT COLOR NO. 347196 (BLACK). THE CONTRACTOR SHALL PROVIDE A PAINT SAMPLE/CHIP TO BE SUBMITTED WITH THE SIGNAL SUPPORT SHOP DRAWINGS FOR REVIEW AND APPROVAL.

ALL EXTERIOR SURFACES OF THE MAST ARM POLE SHAFT ASSEMBLY, MAST ARM ASSEMBLY, ALL BOLT COVERS, ALL CLAMPS, CLEVIS TO CLEVIS UNIVERSAL, WIRE ENTRANCE, ALL HANDHOLE COVERS, LUMINAIRE BRACKETS, POLE AND ARM CAPS SHALL HAVE A COATING PROPERLY APPLIED TO THEM. EXTERIOR SURFACES OF ALL FASTENER BOLTS/SCREWS, WASHER, NUTS, AND OTHER ATTACHMENT HARDWARE SHALL HAVE A COATING APPLIED TO THEM. FASTENER THREADS SHALL NOT BE CLOGGED WITH COATING MATERIAL.

ALL COATED ITEMS SHALL BE SHIPPED IN A MANNER TO MINIMIZE DAMAGE IN TRANSIT. SURFACES SHOULD BE PROTECTED BY FOAM PADDING, BY WRAPPING IN CARDBOARD, BY SPIRAL WRAPPING WITH WAX PAPER, BY CRATING, BY A COMBINATION OF METHODS, OR BY ANY OTHER METHOD SELECTED BY THE MANUFACTURER WHICH WILL INSURE DELIVERY OR UNDAMAGED MATERIALS. MATERIALS DAMAGED IN TRANSIT CAUSED BY IMPROPER PACKAGING OR IMPROPER TRANSIT HANDLING SHALL BE REJECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MATCHING COATING MATERIAL FOR TOUCH-UP WORK IDENTICAL TO THE ORIGINAL COATING PLACED ON THE STRUCTURE.

THE INSIDE OF EACH MAST ARM POLE ASSEMBLY, EACH MAST ARM ASSEMBLY, AND OTHER MAST ARM ACCESSORIES SHALL BE COATED WITH GALVANIZING MATERIAL. THE INSIDE AREA FORMED BY THE GUSSETS, POLE, AND POLE FLANGE PLATE SHALL BE COATED TO PROTECT THE AREA FROM CORROSION. IT IS TO BE NOTED THAT SOME TYPE OF OPENING SHALL BE REQUIRED TO COAT THE GUSSET AREA. THIS OPENING SHALL NOT HAMPER THE STRUCTURAL INTEGRITY OF THE FLANGE ASSEMBLY.

EACH COATING LAYER SHALL BE PROPERLY CURED BEFORE THE APPLICATION OF THE NEXT COAT. THE APPLICATION PROCEDURE SHALL BE SUCH TO GUARANTEE A FINISH THAT WILL NOT SCALE, FLAKE, OR PEEL. THE FINISH SHALL RETAIN ITS COLOR BRIGHTNESS AND APPEARANCE FOR 10 YEARS WITHOUT DULLING, BLOOMING, OR FADING.

MAST ARM POLE ASSEMBLY

EACH POLE SHAFT SHALL:

1. BE MADE OF WELDABLE GRADE, HOT ROLLED COMMERCIAL QUALITY CARBON STEEL FORMED WITH A NOMINAL OUTSIDE BASE DIAMETER.
2. BE CONTINUOUSLY TAPERED FROM THE POLE BOTTOM TO THE POLE AT A RATE RANGING BETWEEN 0.10 TO 0.14 INCH PER FOOT AND SHALL MAINTAIN A CIRCULAR CROSS SECTION (CONSTANT CROSS SECTIONAL RADIUS; W/ 16 POINT SHARP POINT DESIGN).
3. BE CONSTRUCTED WITH A MAXIMUM OF 2 LONGITUDINAL SEAM WELDS.
4. BE CONSTRUCTED USING A CONTINUOUS NON-OVERLAPPING TAPERED TUBE OR TAPERED SECTIONS WELDED AT BUTT JOINTS THAT USE A 3 INCH WIDE BACK-UP RING. A ONE INCH WIDE SPACER RING SHALL BE USED TO FILL IN THE GAP FORMED BY DISSIMILAR GAUGED SECTIONS. THE SPACER SHALL HAVE A WIDTH EQUAL TO THE DIFFERENCE IN SECTION GAUGE SIZES. BUTT JOINT WELDS SHALL BE FULL PENETRATION WELDS. NO SLIP-JOINTED STYLED POLES WILL BE ALLOWED.
5. CONFORM TO ASTM-A595 GRADE A (55,000 PSI MINIMUM YIELD STRENGTH AFTER FABRICATION).
6. HAVE AN ARM FLANGE PLATE THAT IS WELDED TO THE POLE USING GUSSET PLATES ON THE TOP, BOTTOM, AND BOTH SIDES ON THE FLANGE PLATE.
7. HAVE 2 HANDHOLES EACH COMPLETE WITH A COVER (FLUSH WITH THE POLE SURFACE), A RECTANGULAR OR ELLIPTICAL REINFORCED FRAME, AND STAINLESS STEEL FASTENER FOR THE COVER. THE FASTENER SHALL BE FLUSH WITH THE HANDHOLE SURFACE AND SHALL REQUIRE THE USE OF AN ALLEN WRENCH (NOMINAL ⅛ INCH) TO REMOVE. A DIFFERENT HANDHOLE COVER ATTACHMENT CAN BE SUBMITTED FOR APPROVAL BY THE PROJECT MANAGER. THE HANDHOLES SHALL BE LOCATED 180 DEGREES FROM THE MAST ARM.
A. THE TOP HANDHOLE SHALL HAVE A MINIMUM INSIDE OPENING OF 3 INCH X 5 INCH AND BE SIMILAR IN DESIGN TO THE BOTTOM HANDHOLE EXCEPT THAT NO GROUNDING PROVISION IS REQUIRED.
B. THE BOTTOM HANDHOLE SHALL HAVE A MINIMUM INSIDE OPENING OF 4 INCH BY 8 INCH. A GROUNDING PROVISION CAPABLE OF ACCEPTING A #6 AWG COPPER GROUNDING WIRE SHALL BE PROVIDED AND SHALL BE ATTACHED TO THE FRAME.
8. HAVE A 2 INCH (MINIMUM) DIAMETER HOLE WHICH ALIGNS WITH A 2 INCH DIAMETER HOLE IN ITS ARM FLANGE PLATE.
9. HAVE 2 WELDED CABLE SUPPORT HOOKS ("J" HOOKS) LOCATED ON THE INSIDE OF THE POLE 90° FROM THE MAST ARM.
10. BE TELESCOPED THROUGH A BASE PLATE.
11. BE DESIGNED TO SUPPORT A MAST ARM WITH MINIMUM LOADING AS SHOWN IN THE POLE DETAIL DRAWINGS AND BE DESIGNED TO SUPPORT THE ACTUAL ARM LOADING SHOWN ON THE TRAFFIC SIGNAL PLAN.

THE POLE BASE PLATE SHALL:

1. BE FABRICATED FROM ASTM-A36 STEEL (36,000 PSI).
2. TELESCOPE THE POLE SHAFT AND BE WELDED TO THE POLE BY MEANS OF 2 CONTINUOUS WELDS: ONE ON THE INSIDE OF THE BASE PLATE AT THE END OF THE POLE SHAFT AND THE OTHER ON THE OUTSIDE AT THE TOP OF THE BASE PLATE.
3. CONFORM TO THE BOLT PATTERN SHOWN IN THESE PLANS.
4. BE OF PROPER THICKNESS AS TO SUPPORT THE GIVEN LOADS.

THE POLE FLANGE PLATE SHALL:

1. BE WELDED TO THE POLE AT THE HEIGHT SPECIFIED IN THESE PLANS (CENTER LINE OF FLANGE PLATE TO BOTTOM OF THE BASE PLATE).
2. HAVE WELDED SIDE GUSSET PLATES TANGENT TO THE POLE.
3. HAVE WELDED TOP AND BOTTOM GUSSET PLATES THAT HAVE BEEN CUT TO FIT THE CURVATURE OF THE POLE.
4. HAVE ALL PLATES FABRICATED FROM ASTM-A36 STEEL (MINIMUM YIELD STRENGTH OF 36,000 PSI).
5. HAVE A 2 INCH DIAMETER WIRING HOLE CENTERED IN THE ARM FLANGE PLATE. THE CENTER OF THIS 2 INCH HOLE SHALL LINE UP WITH THE CENTER OF THE 2 INCH MINIMUM POLE SHAFT CABLE ENTRY HOLE.
6. HAVE 4 THREADED BOLT HOLES (7 UNC) IN THE FLANGE FOR ATTACHMENT OF THE ARM.
7. COME WITH 4 CONNECTOR BOLTS CONFORMING TO ASTM A325 AND GALVANIZED TO ASTM A153 (INCLUDES WASHER AND LOCKWASHER).
8. HAVE THE INSIDE (POLE SIDE) OF THE ASSEMBLY PROPERLY COATED TO PREVENT RUSTING. AN OPENING IN THIS AREA IS NEEDED FOR GALVANIZING THE INSIDE OF THE ASSEMBLY.
9. CONFORM TO BOLT PATTERN AND DIMENSIONS AS SHOWN IN THESE PLANS. THE GUSSET-FLANGE PLATE DESIGN CAN BE SUCH TO GIVE RISE TO THE ARM.

THE MAST ARM ASSEMBLY SHALL:

1. CONSIST OF AN ARM SHAFT AND A MOUNTING PLATE. THE ARM SHALL BE MADE FROM STEEL CONFORMING AS A MINIMUM TO ASTM-A595 GRADE A (55,000 PSI MINIMUM YIELD STRENGTH). THE ARM FLANGE PLATE SHALL BE MADE FROM STEEL CONFORMING AS A MINIMUM TO ASTM-36 (36,000 PSI). THE FLANGE SHALL HAVE PRE MOUNTING HOLES WHICH ALIGN WITH THE HOLES IN THE POLE FLANGE PLATE.
2. HAVE AN ARM THAT IS CONTINUOUSLY TAPERED FROM THE FLANGE PLATE TO THE END OF THE ARM AT A RATE OF 0.11 TO 0.14 INCH PER FOOT. THE ARM SHALL MAINTAIN A CIRCULAR CROSS SECTION (CONSTANT CROSS SECTIONAL RADIUS; NO MULTI-SIDED ARMS ARE ACCEPTABLE).
3. BE FABRICATED WITHOUT THE USE OF SLIP JOINTS. THE ARM SHAFT SHALL BE CONSTRUCTED USING A CONTINUOUS NON-OVERLAPPING TAPERED TUBE OR TAPERED SECTIONS WELDED AT BUTT JOINTS THAT USE A 3 INCH WIDE BACKUP RING. A 1 INCH WIDE SPACER RING SHALL BE USED TO FILL IN THE GAP FORMED BY DISSIMILAR GAUGED SECTIONS. THE SPACER SHALL HAVE A WIDTH EQUAL TO THE DIFFERENCE IN SECTION GAUGE SIZES. BUTT JOINT WELDS SHALL BE FULL PENETRATION WELDS. NO SLIP JOINTED STYLED ARMS WILL BE ALLOWED.
4. SHALL BE CONSTRUCTED SO THE BASE OF THE ARM TELESCOPES THE FLANGE PLATE. THE ARM SHALL BE CIRCUMFERENTIALLY WELDED TO THE PLATE BY MEANS OF AN INSIDE AND OUTSIDE FILLET WELD WHICH SHALL BE EQUAL TO THE WALL THICKNESS OF THE ARM.
5. HAVE A REMOVABLE END OF ARM CAP ATTACHED BY A MINIMUM OF 3 STAINLESS STEEL SET SCREWS. THIS WILL BE THE ONLY ATTACHMENT METHOD ACCEPTABLE. THE INSIDE DIAMETER OF THE END OF ARM CAP SHALL BE EQUAL TO THE END OF ARM OUTSIDE DIAMETER PLUS TWO TIMES THE ARM TAPER.
6. NOT HAVE PRE-DRILLED HOLES FOR SIGNAL HEAD CABLE ENTRY. HOLES SHALL BE FIELD DRILLED BY THE CONTRACTOR.
7. HAVE AN UPWARD RISE FROM THE POLE SO WHEN THE ARM IS FULLY LOADED, THE END OF THE ARM IS EITHER SLIGHTLY ABOVE (WITHIN 12 INCHES) OR EQUAL TO A HORIZONTAL PLANE THAT PASSES THROUGH THE CENTER LINE OF THE FLANGE ATTACHMENT FOR THE ARM AND POLE. A POLE DEFLECTION OF ZERO (0°) SHALL BE ASSUMED. A SMALL NEGATIVE TANGENT AT THE SMALL END OF THE ARM IS ACCEPTABLE.
8. INCLUDE THE RIGID PIPE MOUNTS AND IT'S ATTACHMENT HARDWARE.

EACH ANCHOR BOLT SHALL:

1. CONFORM AS A MINIMUM TO ASTM-A36 M55 (55,000 PSI MINIMUM YIELD STRENGTH, AND SHALL BE LOW CARBON 0.45% MAXIMUM, TENSILE STRENGTH 75 TO 95 KSI).
2. BE GALVANIZED PER ASTM-A153.
3. COME WITH 2 HEX NUTS MEETING ASTM-A563 GRADE A, ANSI B18.2.2, AND SHALL HAVE ANSI B1.1 CLASS 2 UNC ROLLED THREADS. A WASHER AND LOCK WASHER SHALL ALSO BE PROVIDED.

PAYMENT SHALL BE AS PER ITEM 632.

CALCULATED LMO
CHECKED SDS

TRAFFIC GENERAL NOTES (BID ALTERNATE)

LIC-62-2.41

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD CONSTRUCTION DRAWINGS FOR DETAILS FOR DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET.

THE FOLLOWING QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 603 - 4" CONDUIT, TYPE E 60 FT.

ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THE ANCHOR BASE POLE FOUNDATION SIDES SHALL BE ORIENTATED PARALLEL TO THE SIDEWALK, BACK-OF-CURB, OR EDGE-OF-PAVEMENT AS SHOWN IN THE PLAN. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH ANY ADJACENT SIDEWALK OR CONCRETE AREA.

THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL SIGNAL SUPPORTS. HE/SHE SHALL HAVE ALL UTILITIES FIELD MARKED IN THE AREAS OF THESE PROPOSED SUPPORT LOCATIONS. THE FIELD LOCATIONS OF ALL SIGNALS SUPPORTS AS STAKED SHALL BE APPROVED BY THE PROJECT MANAGER. SIGNAL SUPPORT FOUNDATIONS SHALL BE INSTALLED AND APPROVED BY THE PROJECT ENGINEER PRIOR TO THE ORDERING OF SIGNAL SUPPORTS AND MAST ARMS.

IF POLES ARE LOCATED OTHER THAN AS SHOWN ON THE PLANS, THE LENGTH OF MAST ARMS SHALL BE ADJUSTED. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH 3 COPIES OF A CHART INDICATING THE LENGTH OF ARMS TO BE ORDERED. THE PROJECT MANAGER SHALL RETURN 1 COPY OF THE CHART TO THE CONTRACTOR MARKED APPROVED BEFORE THE CONTRACTOR COMPLETES THE ORDER.

THE FOUNDATION DEPTH SHALL BE INCREASED TO A MINIMUM OF 12 FEET IF MAST ARM LENGTH IS GREATER THAN 48 FEET.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 633, CONTROLLER ITEM MISC.: EXTERIOR FINISHING OF CONTROLLER / UPS CABINET

THE EXTERIOR OF THE CONTROLLER CABINET AND THE UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET SHALL BE FINISHED TO MATCH THE MAST ARM FINISH COLOR. ALL PAINTING SHALL BE PERFORMED UNDER CONTROLLED ENVIRONMENTAL CONDITIONS, AND IN ACCORDANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION, MATERIAL HANDLING, AND APPLICATION. THE TOP FINISH COAT OF PAINT SHALL BE SIMILAR TO VALMONT COLOR NO. 347196 (BLACK). THE CONTRACTOR SHALL PROVIDE A PAINT SAMPLE CHIP TO BE SUBMITTED WITH THE CABINET SHOP DRAWINGS FOR REVIEW AND APPROVAL. THE APPLICATION PROCEDURE SHALL BE SUCH THAT TO GUARANTEE A FINISH THAT WILL NOT SCALE, FLAKE OR PEEL. THE FINISH SHALL RETAIN ITS COLOR BRIGHTNESS AND APPEARANCE FOR 10 YEARS WITHOUT DULLING, BLOOMING, OR FADING.

PAYMENT FOR THESE SERVICES SHALL BE PER ITEM 633.

ITEM 816 VIDEO DETECTION SYSTEM, AS PER PLAN

UNDER THIS ITEM OF WORK THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE EAGLE ITERIS VIDEO DETECTION SYSTEM AT THE PROJECT INTERSECTION. THE VIDEO DETECTION SYSTEM SHALL INCLUDE SIX IMAGE SENSOR UNITS, ALL MOUNTING HARDWARE, ALL CABLING/HARNESSES, AND CONTROLLER CABINET COMPONENT DEVICES (CAMERA INPUT PROCESSOR). THE PROPOSED SYSTEM SHALL BE DESIGNED TO OPERATE ON A 120VAC, 60 HZ INCOMING CONTROLLER CABINET POWER LINE. VIDEO DETECTION ZONES SHALL BE ESTABLISHED FOR EACH OF THE FOUR LEGS AS DETAILED WITHIN.

THE VIDEO DETECTION SYSTEM SHALL INCLUDE THE FOLLOWING COMPONENT ITEMS AT A MINIMUM:
6 EACH: -VANTAGE VIDEO DETECTION CAMERA, (IMAGE SENSING UNIT), 120VAC
6 EACH: -VANTAGE CAMERA POWER CONNECTOR CABLE PIGTAIL 18"
3 EACH: -VANTAGE EDGE TWO (2) CAMERA INPUT PROCESSOR - INCLUDES PRINT MARKUP AND TECH SUPPORT
3 EACH: -VANTAGE EDGE TWO (4) CHANNEL EXTENSION MODULE
900 FT.: -VIDEO COMPOSITE DETECTION & POWER CABLE WITH 600 VOLT INSULATION - INCLUDES CONNECTORS
1 EACH: -SURGE PROTECTED POWER PANEL FOR ITERIS VIDEO DETECTION SYSTEM
2 EACH: -UNIVERSAL MOUNTING BRACKET (ASTROBRACKET) FOR MAST ARM
4 EACH: -ITERIS CAMBRKT-4, UNIVERSAL MOUNTING BRACKET FOR LUMINAIRE ARM & SIGNAL SUPPORT
1 EACH: -VIDEO SECURITY MONITOR, 9" B/W
1 EACH: -VANTAGE CAMERA LENS ADJUSTMENT MODULE W/O DISPLAY

ALL VIDEO DETECTION EQUIPMENT EXCEPT THE IMAGE SENSOR UNITS SHALL BE HOUSED IN THE CONTROLLER CABINET. ALL DEVICES SHALL BE MOUNTED SO ALL CABLE CONNECTIONS ARE ACCESSIBLE AND ALL DEVICE DOORS CAN BE FULLY OPENED FOR SERVICING. SHELF MOUNTED DEVICES SHALL BE POSITIONED SO THEY ARE ACCESSIBLE AND DO NOT INTERFERE WITH OTHER CABINET DEVICES.

THE IMAGE SENSOR UNIT SHALL BE MOUNTED ON A LUMINAIRE BRACKET ARM (SEPARATE BID ITEM) USING A LOW PROFILE BANDED OR CLAMPED MOUNTING ASSEMBLY. THE IMAGE SENSOR MOUNTING ASSEMBLY, BANDING, AND THE IMAGE SENSOR HOUSING INCLUDING THE VISOR SHALL BE FINISHED TO MATCH THE MAST ARM COLOR. THE COMPOSITE VIDEO DETECTION & POWER CABLE SHALL BE RUN CONTINUOUSLY FROM THE IMAGE SENSOR TO THE CONTROLLER CABINET (NO SPLICES).

IN ADDITION TO THE MATERIALS THAT ARE MENTIONED ABOVE OR SHOWN IN THE PLANS, THE CONTRACTOR SHALL ALSO FURNISH THE FOLLOWING DEVICES. THE COST OF THESE DEVICES SHALL BE INCIDENTAL TO THE COST OF THIS VIDEO DETECTION SYSTEM.

1 EACH: SPARE VANTAGE VIDEO DETECTION CAMERA, 120VAC (COMPLETE UNIT)
1 EACH: SPARE UNIVERSAL MOUNTING BRACKET FOR LUMINAIRE ARM (LOW PROFILE)

PAYMENT FOR ALL OF THE ABOVE WILL BE MADE AT THE CONTRACT UNIT PRICE BID, INCLUDING ALL LABOR, MATERIALS AND APPURTENANCES FOR EACH COMPLETE VIDEO VEHICLE DETECTION SYSTEM, INSTALLED TESTED AND ACCEPTED.

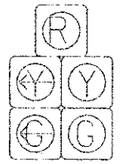
CALCULATED LMC
CHECKED SDS

GENERAL NOTES (BID ALTERNATE)

TRAFFIC

I-G-62-2.41

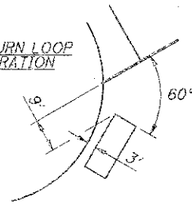
69B
84



#4,8
12" Lens

#1,2,3,6,7,8
12" Lens

RIGHT TURN LOOP CONFIGURATION



NOTES:

-SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH PAINTED, DECORATIVE PIPE HANGER ASSEMBLY.

-CAMERAS V3 & V6 ARE TO BE MOUNTED WITH UNIVERSAL MOUNTING BRACKET (ASTROBRACKET) FOR MAST ARM

-CAMERAS V1 & V4 SHALL BE MOUNTED WITH ITERIS BRACKET, MODEL #: CAMBRKT-4.

-ALL CAMERA MOUNTING BRACKETS, SIGNAL HEAD MOUNTING ASSEMBLIES, AND CAMERA BODIES INCLUDING VISORS SHALL BE PAINTED BLACK TO MATCH MAST ARMS.

-WOOD POLE AND SECOND DISCONNECT SWITCH TO BE FURNISHED UNDER PAY ITEM 632, POWER SERVICE, AS PER PLAN.

24" PULL BOX
STA. 137+49, 41' LT.

1-3" CONDUIT W/(3)-VIDEO CABLES, W/(2)-7/C
1-2" CONDUIT W/ POWER CABLES
IN TRENCH=10'

COMBINATION SIGNAL SUPPORT, POLE 'A'
WITH CAMERA MOUNTED AT TOP
STA. 137+56.3, 52.5' LT.

1-3" CONDUIT W/(3)-VIDEO CABLES, W/(2)-7/C
1-2" CONDUIT W/ POWER CABLES
IN TRENCH=6'

24" PULL BOX
STA. 137+57.7, 46.5' LT.

TRAFFIC CONTROL CABINET,
SECOND DISCONNECT SWITCH
TO BE MOUNTED ON CABINET,
LOCATED ON GENERATOR PANEL SIDE
STA. 137+59, 44' LT.
(FOUNDATION / WORKPAD PER
SCD TC-83.20, SHEET 2/2 FOR TYPE 332)

35' MONO TUBE LUMINAIRE
BRACKET FOR CAMERA

2" CONDUIT
W/ POWER CABLES
IN TRENCH=83'

AERIAL SERVICE CABLE, 5'

PROBABLE POWER SOURCE LOCATION,
ONCE UTILITY RELOCATES

35' MONO TUBE LUMINAIRE
BRACKET FOR CAMERA

COMBINATION SIGNAL SUPPORT, POLE 'B'
WITH CAMERA MOUNTED AT TOP
STA. 137+01.4, 50.3' RT.

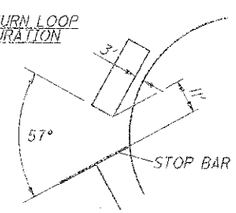
1-3" CONDUIT W/(3) VIDEO CABLES
1-2" CONDUIT W/(2)-7/C
IN TRENCH=14'

24" PULL BOX
STA. 137+15, 55' RT.

1-3" CONDUIT, W/(3) VIDEO CABLES, W/(2)-7/C
JACKED OR DRILLED UNDER PAVEMENT=102'

WOOD POLE, 30'
W/ METER & DISCONNECT SWITCH,
2" CONDUIT RISER
(LOCATE WOOD POLE AT THE SAME OFFSET &
WITHIN 5' OF RELOCATED UTILITY POLE)

RIGHT TURN LOOP CONFIGURATION



LEGEND

- PULLBOX
- 3-SECTION SIGNAL
- 5-SECTION SIGNAL

HORIZONTAL SCALE IN FEET

CALCULATED LMO
CHECKED SDS

TRAFFIC SIGNAL PLAN (BID ALTERNATE)

LIC-62-2.41

69C
84

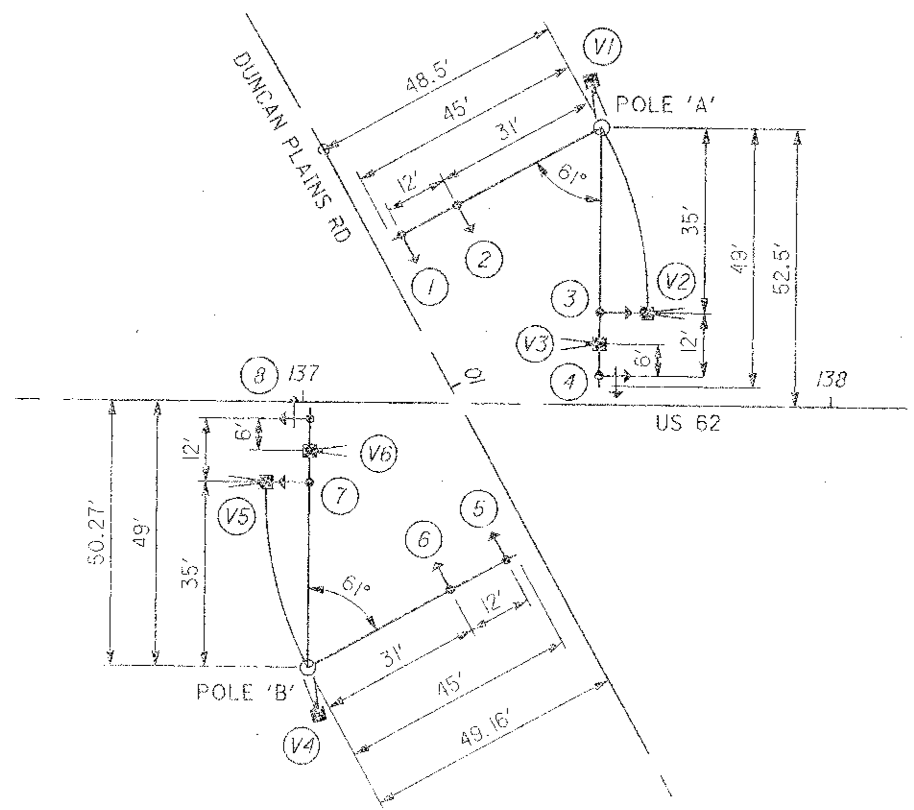
1/23/2026 4:42:43 PM
S:\PRODUCTION\PROJECTS\85274.000 DGN: LIC-62-2.41\ROADWAY\SHEETS\US62-SIGNAL LAYOUT ALTERNATE.DGN

FIELD WIRING HOOKUP CHART			
SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (WB)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
2 (WBLT)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
	←Y	Ø1 Y	
	←G	Ø1 G	
3 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
4 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
5 (EB)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
6 (EBLT)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
	←Y	Ø5 Y	
	←G	Ø5 G	
7 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	
8 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	

SUPPORT NO.	SIGNAL SUPPORT														MAST ARM A ANGLE (DEG.)	ORIENTATION ANGLES MASTARM "A"		
	POLE DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION STATION	FOUNDATION OFFSET	L (FT)	L1 (FT)	L2 (FT)	BRACKET ARM LENGTH (FT.) B1	V1 (FT)	V2 (FT)	V3 (FT)	MAST ARM ATTACHMENT HEIGHT "A"	LUMINAIRE BRACKET ATTACHMENT HEIGHT "B"	TOP OF FOUNDATION ELEVATION		BRACKET ARM	HANDHOLE	POWER SERVICE
A	SPEC.	29′	137+57.7	52.5′ LT	49	47	35	35	34	47	0	18′	28′	1115.9	0°	0°	180°	180°
					45	43	31	-	-	-	-	-	-		61°	-	-	-
B	SPEC.	23′	137+01.4	50.3′ RT	49	47	35	35	34	47	0	12′	22′	1122.4	0°	0°	180°	-
					45	43	31	-	-	-	-	-	-		61°	-	-	-

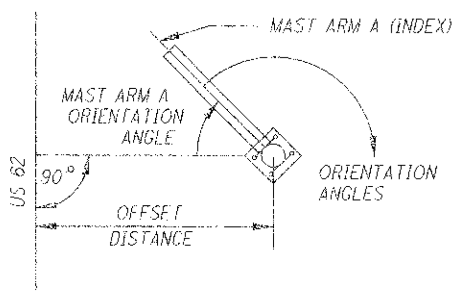
POLE DIAGRAM

'NOT TO SCALE'

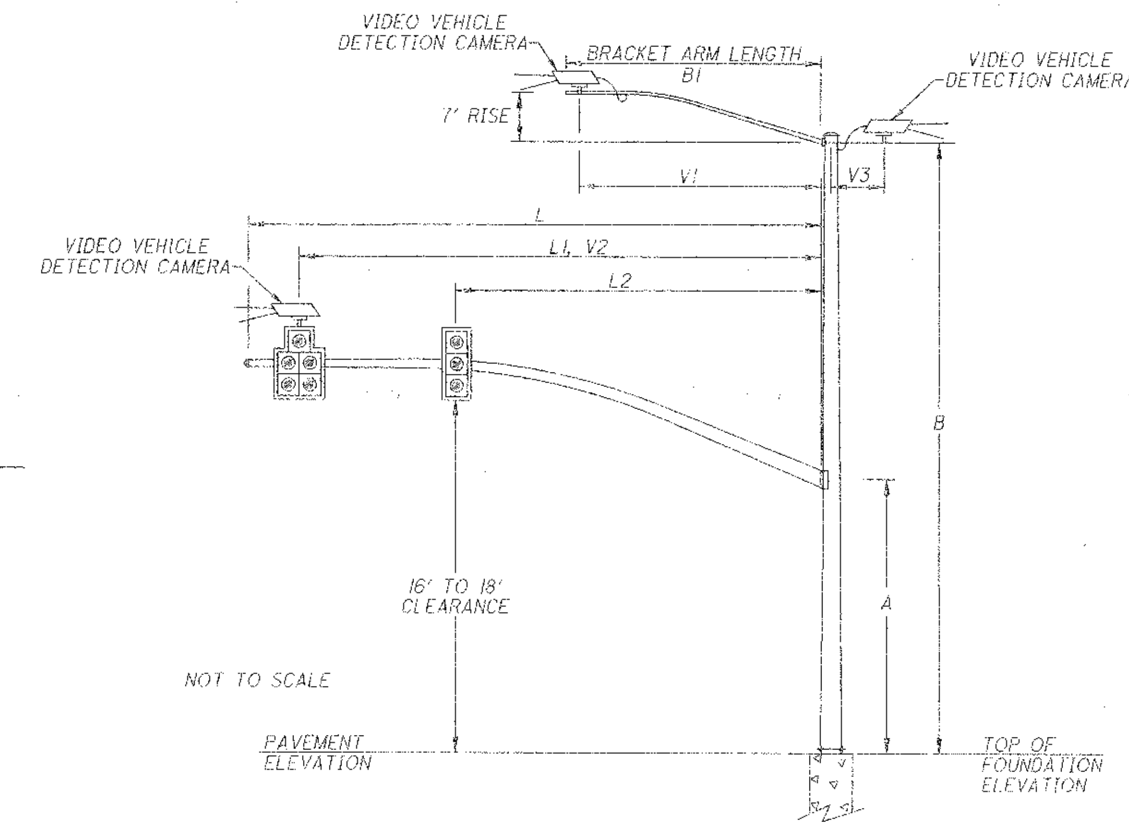


MAST ARM POLE ORIENTATION DETAIL

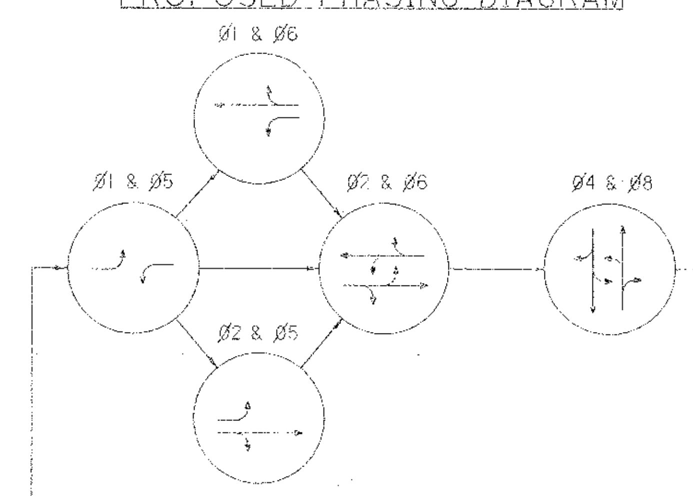
NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM)



SIGNAL & CAMERA PLACEMENT



PROPOSED PHASING DIAGRAM



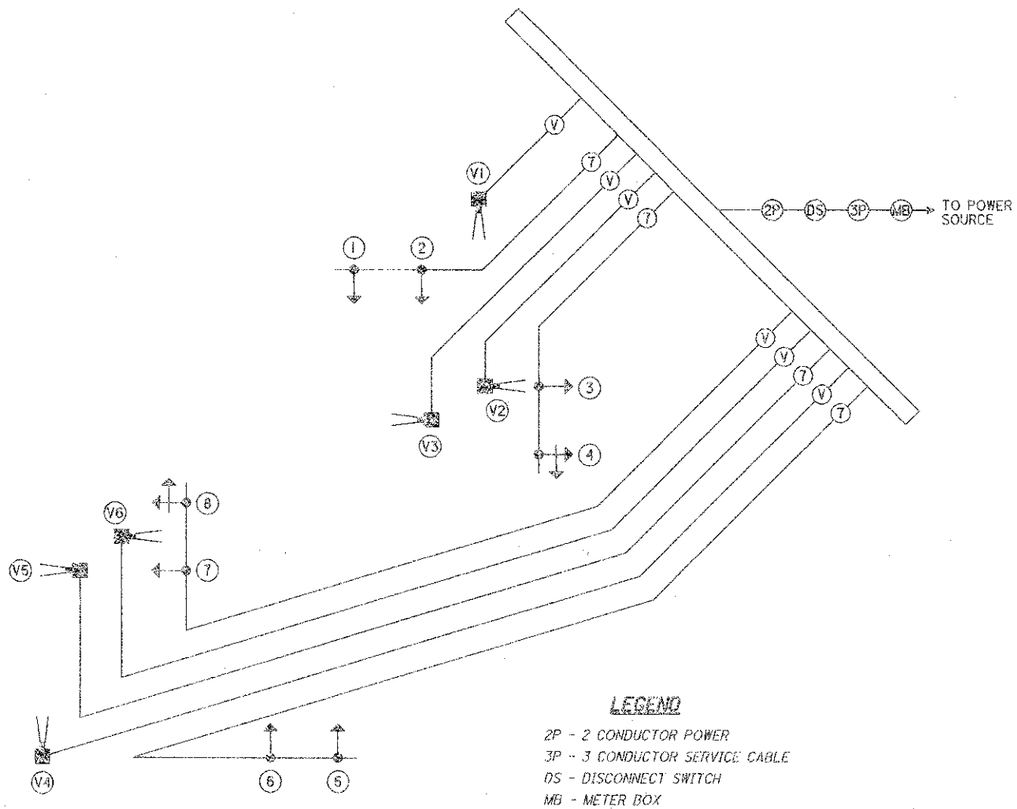
DETECTOR DATA							
DETECTOR #	LOCATION	SIZE	TYPE	DIRECTIONALITY	DELAY	ASSOCIATED CONTROLLER PHASE	DESCRIPTION
L1	2′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	5 SEC	Ø5	EB LT
L2	200′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø2	EB NEAR
L3	385′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø2	EB FAR
L4	SPECIAL, SEE DETAILS SHEET 64	8′X 20′	PRESENCE	ENABLED	8 SEC	Ø4	SB 1
L5	8′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	5 SEC	Ø4	SB 2
L6	2′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	3 SEC	Ø4	SB LT
L7	2′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	5 SEC	Ø1	WB LT
L8	200′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø6	WB NEAR
L9	365′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø6	WB FAR
L10	SPECIAL, SEE DETAILS SHEET 64	8′X 25′	PRESENCE	ENABLED	8 SEC	Ø8	NB 1
L11	8′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	5 SEC	Ø8	NB 2
L12	2′ IN FRONT OF STOP LINE	8′X 40′	PRESENCE	ENABLED	3 SEC	Ø8	NB LT
L13	100′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø4	SB NEAR
L14	100′ BEHIND STOP LINE	2′X 8′	PRESENCE	DISABLED		Ø8	NB NEAR

CALCULATED LMO
CHECKED SDS

TRAFFIC SIGNAL DETAILS (BID ALTERNATE)

LIC-62-2.41

WIRING DIAGRAM



LEGEND

2P - 2 CONDUCTOR POWER
3P - 3 CONDUCTOR SERVICE CABLE
DS - DISCONNECT SWITCH
MB - METER BOX
V - VIDEO POWER / COAXIAL CABLE

TRAFFIC SIGNAL SUBSUMMARY

ITEM	ITEM EXT.	TYP	HOOK COUNTY	TOTAL	UNIT	ITEM DESCRIPTION	SEE SHEET NO.
625	25400	133		133	FT	CONDUIT, 2", 725.04	
625	25500	45		45	FT	CONDUIT, 3", 725.04	
625	25900	102		102	FT	CONDUIT, 3", JACKED OR DRILLED UNDER PAVEMENT	
625	29003	113		113	FT	TRENCH, 24" DEEP, AS PER PLAN	63
625	30706	3		3	EACH	PULL BOX, 725.08, 24"	
625	32001	3		3	EACH	GROUND ROD, AS PER PLAN	63
632	05001	6		6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN	63
632	05081	2		2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN	63
632	25000	8		8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
632	40700	652		652	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	64011	2		2	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	69B
632	67200	200		200	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
632	69800	40		40	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	70001	1		1	EACH	POWER SERVICE, AS PER PLAN	63
632	70400	1		1	EACH	CONDUIT RISER, 2" DIAMETER	
632	90400	1		1	EACH	SIGNALIZATION, MISC.: COMBINATION SIGNAL SUPPORT, 29' HIGH, 15.0" BASE, 49' MAST ARM, 45' MAST ARM, 35' LUMINAIRE BRACKET, BLACK, ASSEMBLY	69A
632	90400	1		1	EACH	SIGNALIZATION, MISC.: COMBINATION SIGNAL SUPPORT, 23' HIGH, 15.0" BASE, 49' MAST ARM, 45' MAST ARM, 35' LUMINAIRE BRACKET, BLACK, ASSEMBLY	69A
633	01601	1		1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN	63
633	67000	1		1	EACH	CABINET RISER	
633	67100	1		1	EACH	CABINET FOUNDATION	
633	67200	2		2	EACH	CONTROLLER WORK PAD	
633	75000	1		1	EACH	UNINTERUPTIBLE POWER SUPPLY (UPS), 1000 WATT	
633	99300	LUMP		LUMP		CONTROLLER ITEM, MISC.: EXTERIOR FINISHING OF CONTROLLER / UPS CABINET	69B
816	30001	1		1	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	69B

CALCULATED LMO
CHECKED SDS

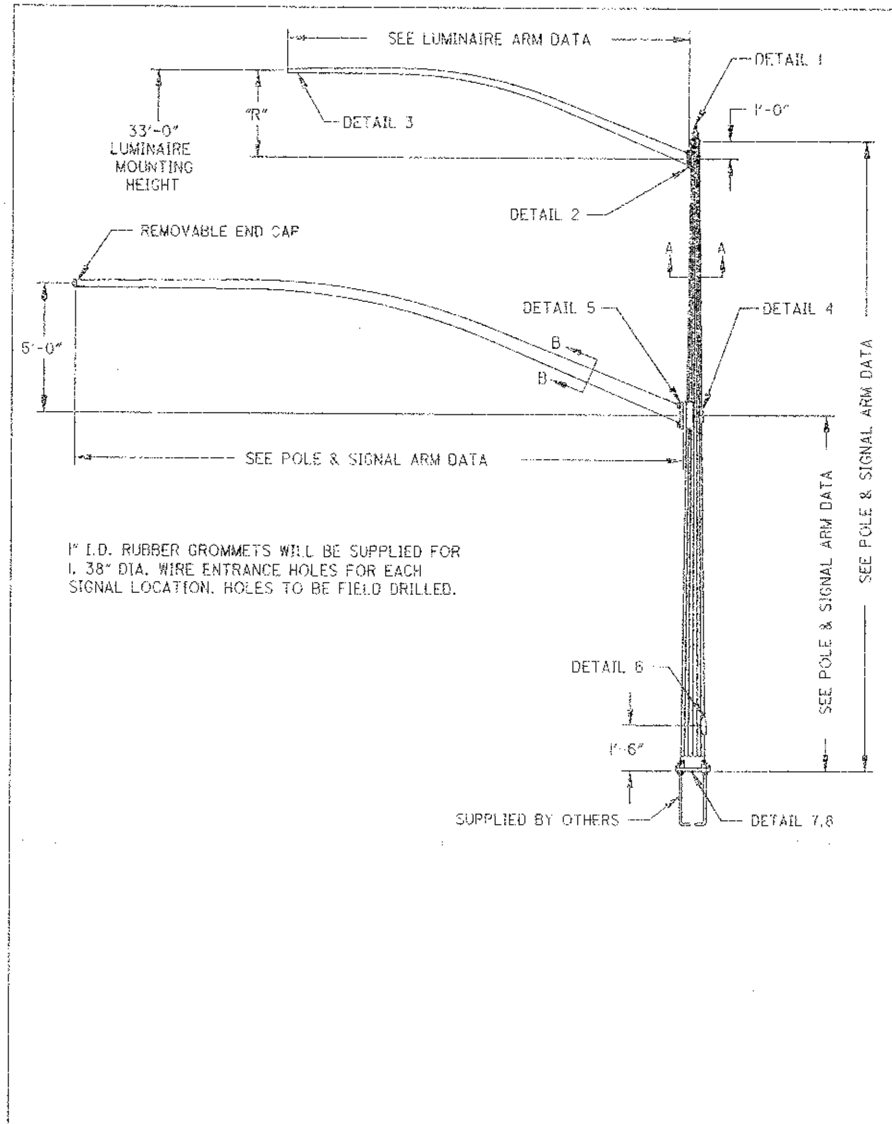
SIGNAL DETAILS (BID ALTERNATE)

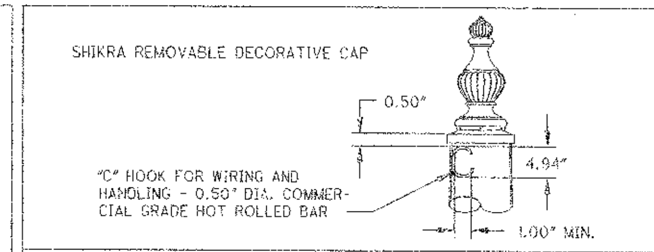
TRAFFIC SIGNAL

LIC-62-2.41

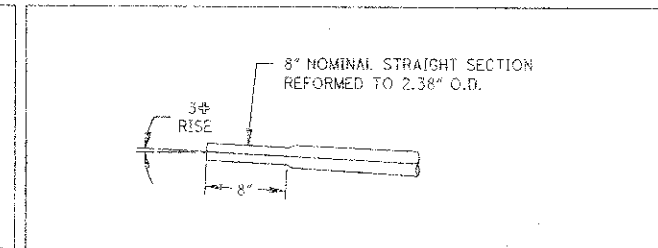
69E
84

TRAFFIC SIGNAL DETAILS (BID ALTERNATE)

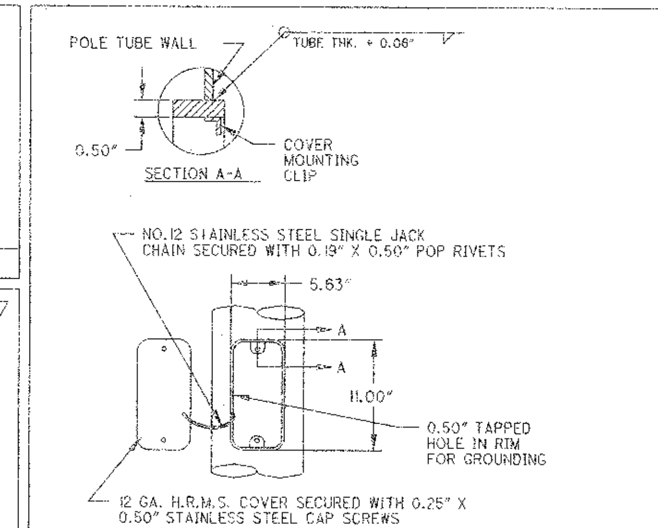




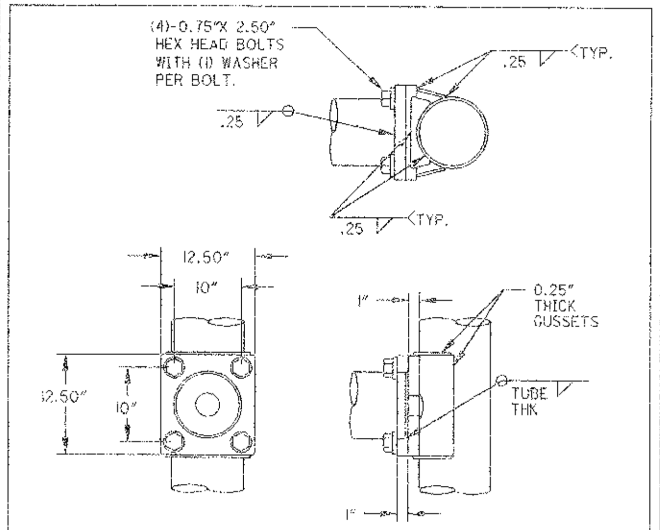
DETAIL 1 — DECORATIVE CAP ASSEMBLY



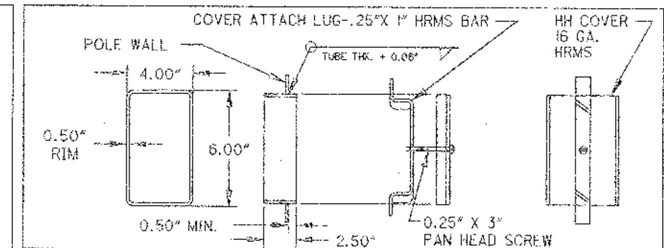
DETAIL 3 — ARM END



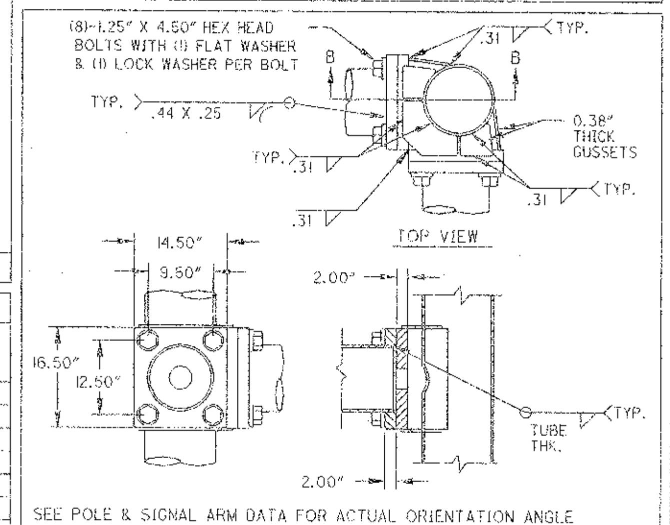
DETAIL 6 — HANDHOLE



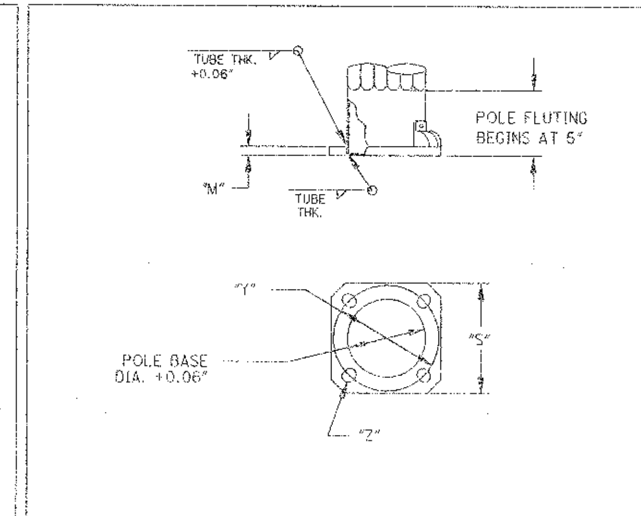
DETAIL 2 — LUMINAIRE ARM ATTACHMENT



DETAIL 4 — HANDHOLE



DETAIL 5 — DOUBLE SIGNAL ARM ATTACHMENT



DETAIL 7 — POLE BASE

LUMINAIRE ARM DATA

QTY.	ARM SPAN "L" (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	GUAGE OR THICK (IN)	RISE HEIGHT "R"
2	35.00	7.42	2.38	.1196	7'-0"

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A572 GR.65	65
POLE BASE	A36	36
ARM SHAFTS	A595 GR.A	55
ARM CONNECTIONS	A36	36
ARM CONN. BOLTS	A325	
GALVANIZING	A123 & A153	
ANCHOR BOLTS	BY OTHERS	

FINISH DATA

BASE COAT: HOT DIP GALVANIZE TO ASTM A123

TIE COAT: AROMATIC URETHENE, ZINC RICH

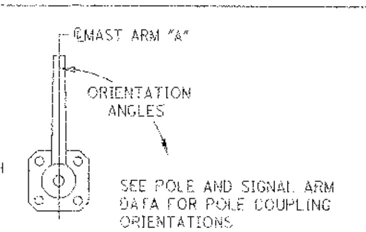
FINISH COAT: ALIPHATIC ACRYLIC POLYURETHANE

COLOR: BLACK (VALMONT NO. 347196)

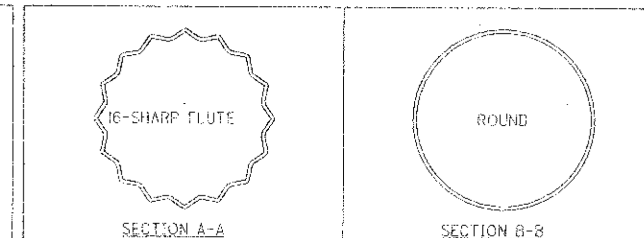
VALMONT SPEC: F-569

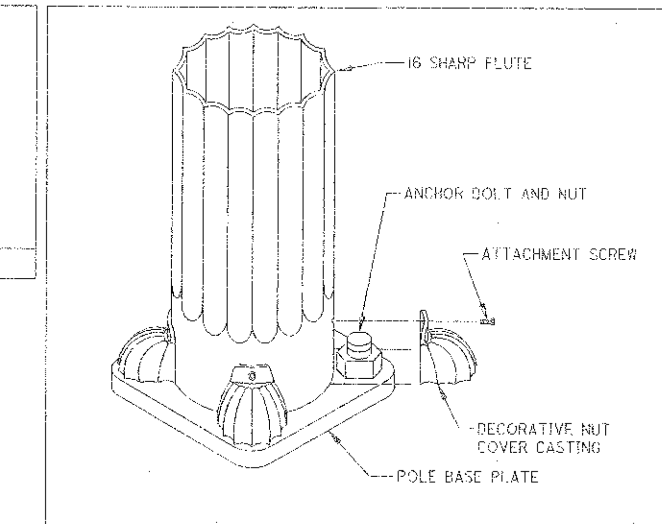
RADIAL INDEX

1. ALL ANGLES MEASURED CLOCKWISE FROM MAST ARM "A" AS VIEWED FROM THE SMALL END OF THE POLE.
2. BASE PLATE IS SQUARE WITH MAST ARM "A", ANCHOR BOLT HOLE AT 45° FROM THE MAST ARM.



SHAFT CROSS SECTION





DETAIL 8 — DECORATIVE NUT COVER DETAIL

POLE AND SIGNAL ARM DATA

POLE REF.	STATION	QTY.	POLE TUBE: BASE DIA. (IN)	POLE TUBE: TOP DIA. (IN)	POLE TUBE: LENGTH (FT)	POLE TUBE: GAUGE OR THK. (IN)	POLE BASE: SQUARE "S" (IN)	POLE BASE: BOLT CIRCLE "Y" (IN)	POLE BASE: THK. "M" (IN)	POLE BASE: HOLE "Z" (IN)	ANCHOR BOLT: DIA. "K" (IN)	ANCHOR BOLT: LENGTH "J" (IN)	ANCHOR BOLT: HOOK "H" (IN)	ANCHOR BOLT: THREAD LENGTH "U" (IN)	SIGNAL ARM TUBE: MAST ARM	SIGNAL ARM TUBE: ATTACH HEIGHT (FT)	SIGNAL ARM TUBE: FIXED END DIA. (IN)	SIGNAL ARM TUBE: FREE END DIA. (IN)	SIGNAL ARM TUBE: GAUGE OR THICK (IN)	SIGNAL ARM TUBE: SPAN (FT)	ORIENTATIONS: MAST ARM "B"	ORIENTATIONS: HAND HOLE	LUMINAIRE ARM SPAN (FT)
A	137+56.3	1	15.00	11.22	29.00	0.250	20.50	20.00	1.75	2.13	1.75	84	6	9	A	18.00	10.00	3.14	7	49.00	61°	180°	35.00
															B	18.00	10.00	3.70	7	45.00			
B	137+01.4	1	15.00	11.22	23.00	0.250	20.50	20.00	1.75	2.13	1.75	84	6	9	A	12.00	10.00	3.14	7	49.00	61°	180°	35.00
															B	12.00	10.00	3.70	7	45.00			

CALCULATED LMO | CHECKED SDS

LIC-62-2.41

SHEET NO.	ROADWAY	STATION FROM	STATION TO	SIDE	INTERVAL	STP 621 1-WAY WHITE EACH	VILLAGE 621 1-WAY WHITE EACH	STP 621 2-WAY WHITE/RED EACH	VILLAGE 621 2-WAY WHITE/RED EACH	STP 621 2-WAY YELLOW/YELLOW EACH	VILLAGE 621 2-WAY YELLOW/YELLOW EACH
	U.S. 62 (WEST LEG)										
72		127+42	131+42	RT.	80	5					
72		132+50	136+55	RT.	40	11					
72		132+50	133+55	LT.	40			4			
72		134+04	136+55	RT.	40			8			
72		125+95	131+42	LT./RT.	80					13	
72		132+50	136+55	LT./RT.	80					8	
	U.S. 62 (EAST LEG)										
72		138+00	142+00	LT.	40	11					
72		142+00	146+00	LT.	80	5					
72		138+00	140+15	LT.	40			7			
72		138+00	149+00	LT./RT.	80					22	
	DUNCAN PLAINS ROAD (SOUTH LEG)										
73		2+25	5+08	LT./RT.	80		5				
73		5+08	9+08	LT./RT.	40	8	3				
73		6+01	9+08	RT.	40				9		
73		2+25	9+08	LT./RT.	80					5	12
	DUNCAN PLAINS ROAD (NORTH LEG)										
73		10+91	14+30	LT./RT.	40	10					
73		10+91	11+75	LT.	80				3		
73		10+91	14+30	LT./RT.	80					5	6
					PARTICIPATION SUBTOTALS	50	8	19	12	53	18
					COLUMN SUBTOTALS	58		31		71	
					TOTALS CARRIED TO GENERAL SUMMARY	160					

CALCULATED SDS
CHECKED LMO

RAISED PAVEMENT MARKER SUBSUMMARY

LIC-62-2.41

$TIME$
$DATE$
$FILE$

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	QUANTITY (FEET)	STP 644 EDGE LINE MILE	VILLAGE 644 EDGE LINE MILE	STP 644 CENTER LINE MILE	VILLAGE 644 CENTER LINE MILE		STP 644 CHANNELIZING LINE FT.	VILLAGE 644 CHANNELIZING LINE FT.	STP 644 STOP LINE FT.	VILLAGE 644 STOP LINE FT.		STP 644 TRANSVERSE / DIAGONAL LINE FT.	VILLAGE 644 TRANSVERSE / DIAGONAL LINE FT.	STP 644 LANE ARROW EACH	VILLAGE 644 LANE ARROW EACH	STP 644 WORD ON PAVEMENT, 96" EACH	VILLAGE 644 WORD ON PAVEMENT, 96" EACH
		U.S. 62																				
72	EL		125+95	149+00	LT./RT.	4610	0.873															
72	SS		125+95	149+00	LT./RT.	3042			0.576													
72	CH		132+50	140+15	LT./RT.							535										
72	ST		132+50	138+00	LT./RT.									57								
72	TR		129+00	144+85	LT./RT.												428					
72	A		132+80	140+35	LT./RT.														5			
72	W		135+37	139+18	LT./RT.																2	
		CLOVER VALLEY ROAD																				
72	SS		10+00	12+00	LT./RT.	21			0.004													
72	ST		10+00	12+00	LT.									11								
		DUNCAN PLAINS ROAD																				
73	EL		2+25	14+30	LT./RT.	2410	0.311	0.145														
73	SS		2+25	14+30	LT./RT.	1816			0.155	0.189												
73	CH		6+01	11+75	LT./RT.								391									
73	ST		9+08	10+91	LT./RT.									34	22							
73	TR		2+25	14+30	LT./RT.													387				
73	A		6+01	11+75	LT./RT.															4		
73	W		7+90		LT./RT.																	1
					COLUMN SUBTOTALS		1.184	0.145	0.735	0.189												
					PARTICIPATION SUBTOTALS		1.18	0.15	0.74	0.19		535	391	102	22		428	387	5	4	2	1
		TOTALS CARRIED TO GENERAL SUMMARY					**1.33**		**0.93**			**926**		**124**			**815**		**9**		**3**	

CALCULATED SDS
CHECKED LMO

PAVEMENT MARKING SUBSUMMARY

LIC-62-2.41

70A
84

$TIME$
$DATE$
$FILE$

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	STP 630 GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN FT.	VILLAGE 630 GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN FT.		STP 630 SIGN, FLAT SHEET SQ. FT.	VILLAGE 630 SIGN, FLAT SHEET SQ. FT.		STP 630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH		STP 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH				
		U.S. 62																	
72	1S		131+22	LT.	M3-4	24x12	12			2			1						
					M1-4	24x24				4									
72	2S		132+50	LT.	R3-H8BA-30	30x30	12			6.25									
72	4S		132+75	RT.	M3-2	24x12	12			2									
					M1-4	24x24				4									
72	5S		132+29	RT.	D3-1	48x12	20			4			1						
72	6S		133+06	RT.	W3-3	30x30	15			6.25			1						
					W16-8	24x12				2									
72	7S		133+70	RT.	R3-H8BH-36	36x30	12			7.5									
72	8S		134+20	LT.	R3-H8BA-30	30x30	12			6.25									
72	9S		135+50	LT.	W2-2L	30x30	13.5	13.5		6.25			1						
					W16-8	24x12				2									
72	10S		136+55	RT.	R3-H8BH-36	36x30	12			7.5									
72	12S		138+00	LT.	R3-H8BH-36	36x30	12			7.5									
72	14S		138+60	RT.	D3-1	48x12	20			4			1						
72	15S		135+95	LT.	D3-1	48x12	20			4			1						
72	16S		139+34	RT.	M3-2	24x12	12			2			1						
					M1-4	24x24				4									
72	17S		140+15	LT.	R3-H8BH-36	36x30	12			7.5									
72	18S		144+43	LT.	W3-3	30x30	15			6.25			1						
					W16-8	24x12				2									
72	25S		140+60	LT.	R3-5R	30x36	13.5			7.5									
72	26S		140+85	RT.	R3-2	24x24	12.5			4									
		CLOVER VALLEY ROAD																	
72	3S		10+25	RT.	R1-1	30x30	12	12		6.25			1						
		DUNCAN PLAINS ROAD																	
72	11S		10+48	LT.	R1-1								1						
72	13S		9+39	RT.	R1-1								1						
72	23S		9+50	LT.			12								1				
73	19S		5+31	RT.	R3-H8BH-36	36x30		12			7.5								
73	20S		9+08	RT.	R3-H8BH-36	36x30		12			7.5								
73	21S		10+91	LT.	R3-H8BH-36	36x30		12			7.5								
73	22S		12+40	LT.	R3-H8BH-36	36x30		12			7.5								
73	24S		12+35	RT.			12								1				
						PARTICIPATION SUBTOTALS	273.5	73.5		115	30								
		TOTALS CARRIED TO GENERAL SUMMARY					**347**			**145**			**11**		**2**				

CALCULATED SDS CHECKED LMO

SIGNING SUBSUMMARY

LIC-62-2.41

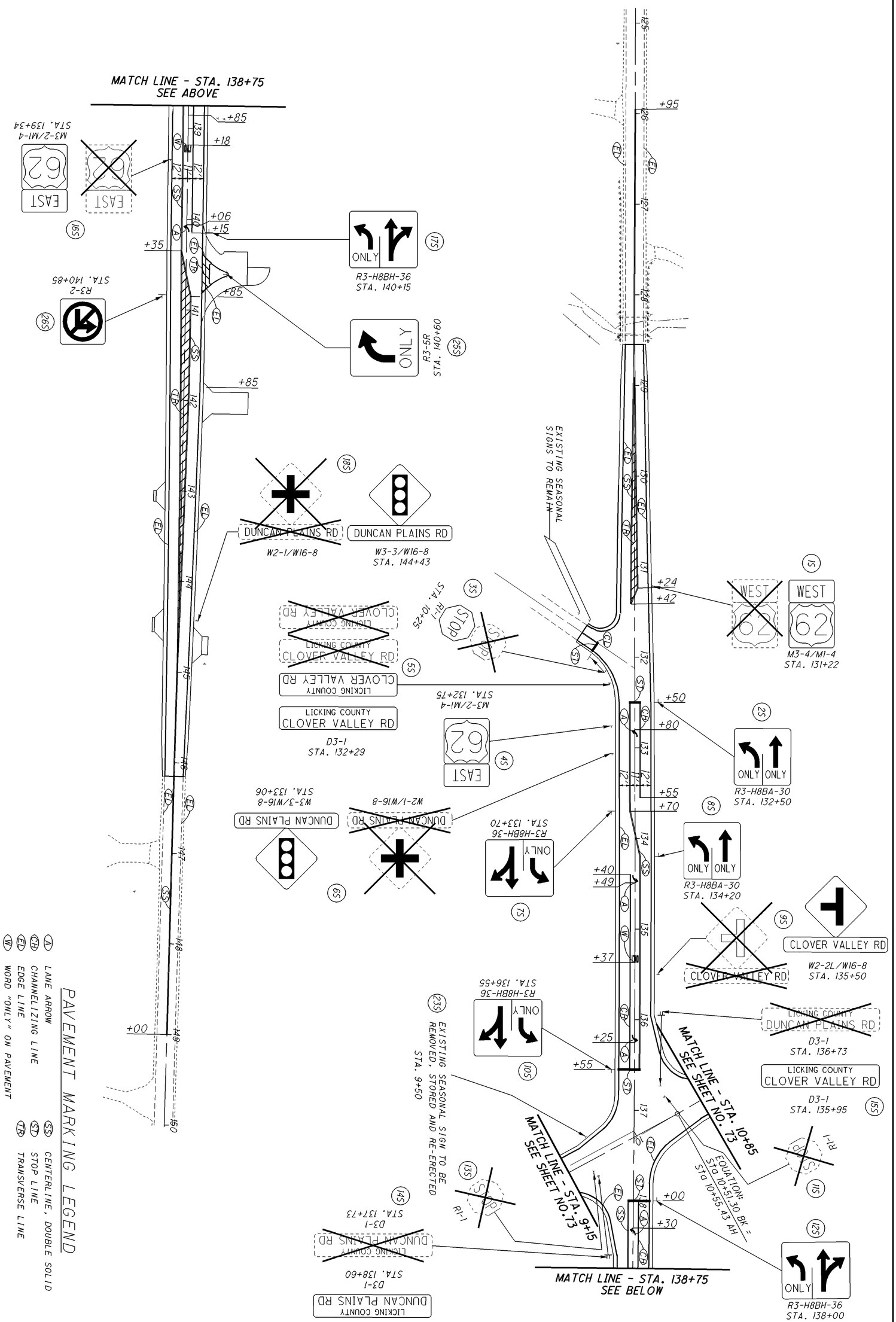
71
84

$TIME$

$DATE$
$FILE$

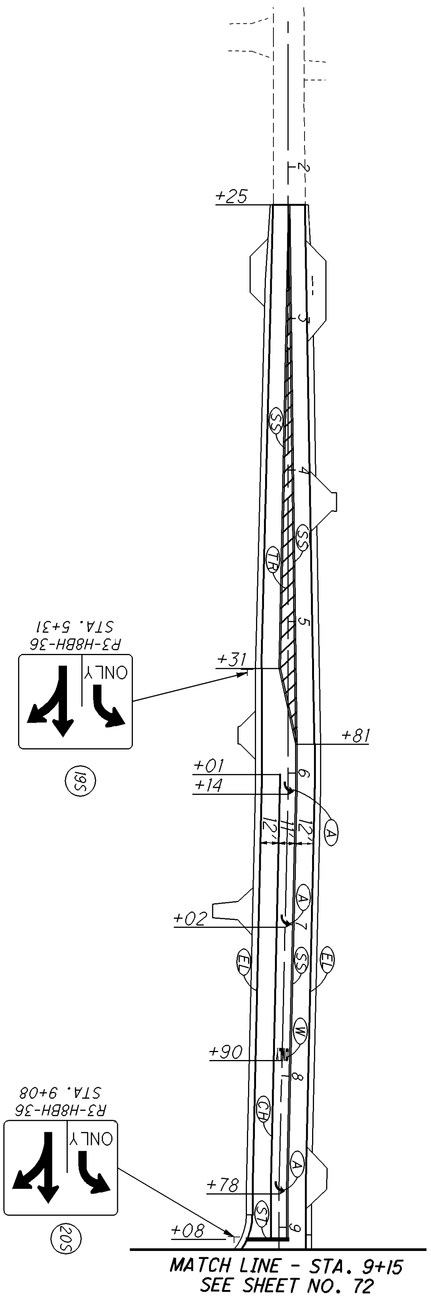
$DATE$
$FILE$

$TIME$



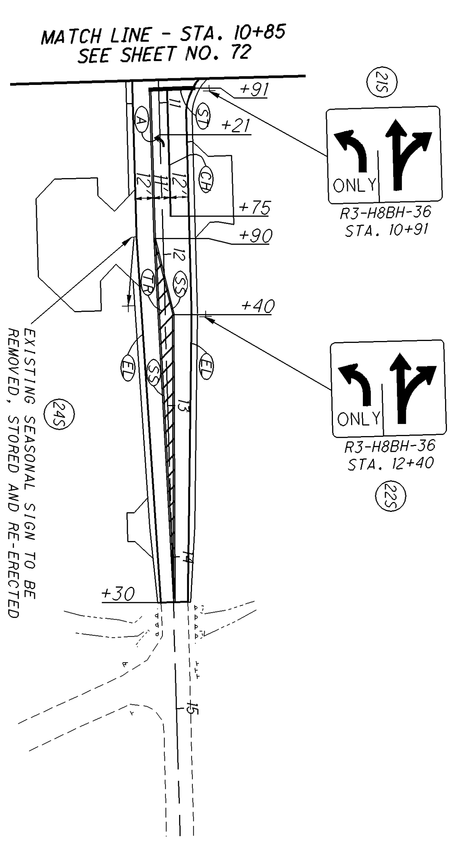
72/84	LIC-62-2.41	TRAFFIC CONTROL - U.S. 62 PAVEMENT MARKING AND SIGNING PLAN	CALCULATED NBC CHECKED SDS	0 50 25 100 HORIZONTAL SCALE IN FEET

$DATE$
$FILE$ $TIME$



PAVEMENT MARKING LEGEND

(A)	LANE ARROW
(CD)	CHANNELIZING LINE
(ED)	EDGE LINE
(W)	WORD "ONLY" ON PAVEMENT
(SS)	CENTERLINE, DOUBLE SOLID
(ST)	STOP LINE
(TB)	TRANSVERSE LINE, YELLOW



73/84	LIC-62-2.41	TRAFFIC CONTROL - DUNCAN PLAINS RD. PAVEMENT MARKING AND SIGNING PLAN	CALCULATED NBC CHECKED SDS	0 50 25 100 HORIZONTAL SCALE IN FEET

UTILITY OWNERS	
TYPE	NAME & ADDRESS
ELECTRIC	AMERICAN ELECTRIC POWER, CENTRAL OHIO REGION 850 TECH CENTER DRIVE GAHANNA, OHIO 43230 (614) 883-6829
TELEPHONE	SPRINT 441 WEST BROAD STREET PATASKALA, OHIO 43062 (740) 927-8282

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

REFERENCE POINT INFORMATION IS CONTAINED IN THE CONSTRUCTION PLAN.

MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET
- STONE FOUND

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease. (Ex) Ex SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)

Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

Lockwood, Lanier, Mathias & Noland, Inc.
Civil Engineers / Land Surveyors
2475 SUGAR GROVE ROAD, SE
LANCASTER, OHIO 43130
(740) 687-5542 Fax (740) 687-0086

62-RLS1.dgn

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

LEGEND

WD = WARRANTY DEED
T = TEMPORARTY

RIGHT OF WAY LEGEND SHEET LIC-62-2.41

LICKING COUNTY
MONROE TOWNSHIP
SEC. 17, 18, 23 & 24, T. 3N, R. 15W

INDEX OF SHEETS:

PROJECT DESCRIPTION

IMPROVEMENT OF THE INTERSECTION OF U.S. 62 AND DUNCAN PLAINS RD. VIA HORIZONTAL AND VERTICAL REALIGNMENT OF DUNCAN PLAINS RD., THE ADDITION OF LEFT TURN LANES ON U.S. 62, AND INSTALLATION OF A TRAFFIC SIGNAL.

PLANS PREPARED BY:

FIRM NAME: LOCKWOOD, LANIER, MATHIAS & NOLAND, INC.
PLANS PREPARED BY: NATHAN L. CONNER & CHRISTINE M. LANE

FIELD REVIEW BY: CHRISTINE M. LANE
DATE COMPLETED: 11-16-06

OWNERSHIP VERIFIED BY: CHRISTINE M. LANE
DATE COMPLETED: 11-15-06

DATE COMPLETED: 11-29-06

I, Richard F. Mathias, P.S., have conducted a survey of the existing conditions for the Ohio Department of Transportation in March, 2006. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on a local coordinate system. Furthermore; I have calculated the proposed property lines, Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire these parcels as shown herein. As part of this project I have determined the locations of the existing property lines for property takes contained herein. I have also set monuments at the proposed Property Corners, Section Corners and other points shown herein. The Centerline Monumentation called for herein will be set under my direct supervision during the construction of this project. This work will be done in accordance with OAC 4733-37 as cited below. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as Minimum Standards for Boundary Survey in the State of Ohio unless so noted. The words I and my as used herein are to mean that either myself or someone working for me under my direct control or supervision.

Richard F. Mathias
Richard F. Mathias, P.S., Ohio Lic.# 7798

SURVEYORS SEAL:

STATE OF OHIO
RICHARD F. MATHIAS
S-7798
REGISTERED SURVEYOR

SIGNED: Richard F. Mathias
DATE: 1-10-07

FEDERAL PROJECT NO.

PID NO. 75711

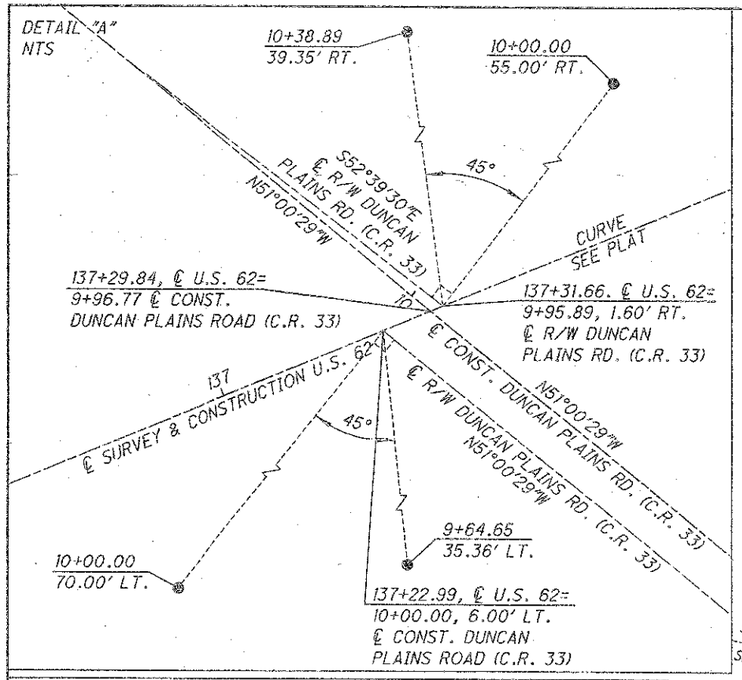
CALCULATED CML
CHECKED RFM

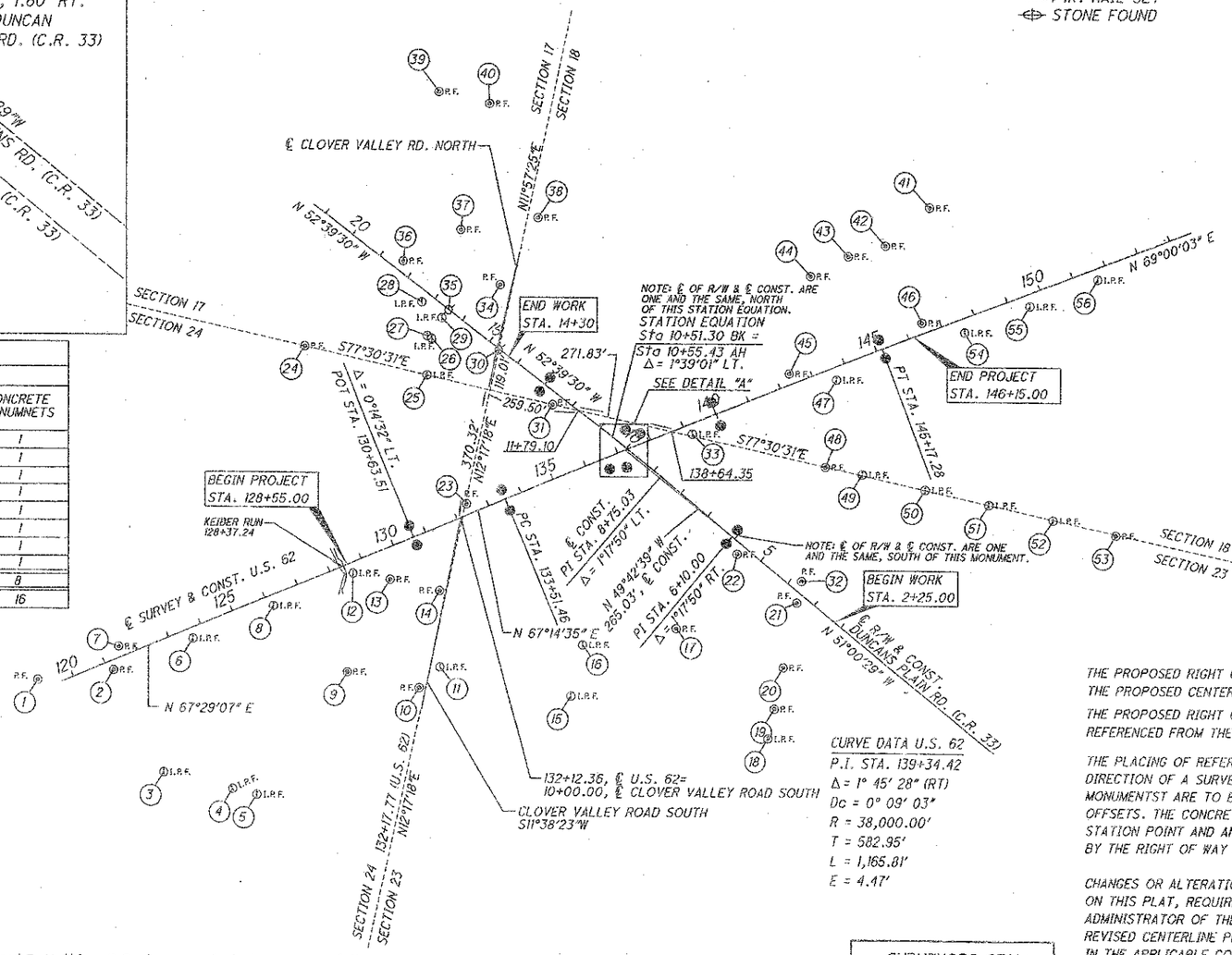
RIGHT OF WAY LEGEND SHEET

LIC-62-2.41

1 / 11

LICKING COUNTY
MONROE TOWNSHIP
SECTIONS 17,18, 23 & 24, T. 3 N., R. 15 W.





MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- R.F. IRON PIPE FOUND
- R.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET
- STONE FOUND

RECEIVED _____, 20 ____
RECORDED _____, 20 ____
INST. NO. _____
BRYAN A. LONG
LICKING COUNTY RECORDER

SCALE IN FEET: 0, 100, 200, 400

PID NO. 75711

R/W DESIGNER C.M.L.
R/W REVIEWER R.F.M.

PLAT

CENTERLINE PL

LIC-62-2.41

CONCRETE REFERANCE MONUMENTS TO BE SET DURING CONSTRUCTION					
U.S. 62			DUNCAN PLAINS RD.		
STATION	OFFSET	CONCRETE MONUMENTS	STATION	OFFSET	CONCRETE MONUMNETS
130+63.51	35.00' LT.	1	06+10.00	25.00' LT.	1
130+63.51	25.00' RT.	1	06+10.00	25.00' RT.	1
133+51.46	28.00' LT.	1	09+64.65	35.36' LT.	1
133+51.46	35.00' RT.	1	10+00.00	70.00' LT.	1
140+00.00	35.00' LT.	1	10+00.00	55.00' RT.	1
140+00.00	35.00' RT.	1	10+38.89	39.35' RT.	1
145+17.28	28.00' LT.	1	13+00.00	25.00' LT.	1
145+17.28	28.00' RT.	1	13+00.00	25.00' RT.	1
SUBTOTAL		8		SUBTOTAL	8
TOTAL (CARRIED TO GENERAL SUMMARY)					16

EXISTING PINS FOUND

℄ SURV. & CONST. U.S. 62			
1	119+61.39, 30.68 LT.	33	139+16.82, 28.45 RT.
2	121+16.77, 26.83 RT.	41	147+88.91, 329.94 LT.
3	121+39.80, 352.62 RT.	42	146+31.16, 272.27 LT.
4	123+7.01, 471.50 RT.	43	145+18.99, 282.25 LT.
5	123+65.15, 512.95 RT.	44	143+97.11, 267.76 LT.
6	123+64.70, 29.92 RT.	45	142+39.76, 30.20 LT.
7	121+55.91, 30.02 LT.	46	146+51.44, 29.27 LT.
8	126+14.92, 29.89 RT.	47	143+61.65, 35.62 RT.
9	127+38.35, 284.43 RT.	48	142+41.33, 266.10 RT.
10	129+14.52, 404.80 RT.	49	143+34.51, 314.14 RT.
11	129+93.56, 372.06 RT.	50	144+90.79, 418.92 RT.
12	128+62.00, 29.74 RT.	51	146+46.42, 523.06 RT.
13	129+54.77, 86.30 RT.	52	148+01.56, 627.47 RT.
14	130+74.84, 169.79 RT.	53	149+56.65, 731.80 RT.
15	133+10.44, 592.52 RT.	54	147+66.38, 39.50 RT.
16	133+97.20, 469.70 RT.	55	149+66.29, 33.88 RT.
23	132+42.60, 29.70 LT.	56	151+65.77, 31.29 RT.

℄ R/W & CONST. DUNCAN PLAINS ROAD (C.R. 33)			
17	5+65.61, 303.95' LT.	29	16+51.22, 30.71 LT.
18	1+62.08, 380.94' LT.	30	14+65.61, 1.52 LT.
19	2+01.77, 303.28' LT.	31	12+47.18, 31.31 LT.
20	2+56.93, 195.11' LT.	32	3+72.12, 29.91' RT.
21	3+43.57, 26.47' LT.	34	15+75.43, 148.37 RT.
22	5+66.92, 29.69' LT.	35	16+50.11, 0.77 LT.
24	19+15.82, 338.00 LT.	36	18+39.50, 29.84 RT.
25	15+85.91, 187.37 LT.	37	17+61.75, 204.01 RT.
26	16+39.09, 95.84 LT.	38	16+06.81, 366.80 RT.
27	16+53.91, 97.02 LT.	39	20+52.58, 477.75 RT.
28	17+25.07, 30.49 LT.	40	19+16.19, 540.38 RT.

I, Richard F. Mathias, P.S., have conducted a survey of the existing conditions for the Ohio Department of Transportation in March, 2006. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on a local coordinate system. Furthermore; I have calculated the proposed property lines, Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire these parcels as shown herein. As part of this project I have determined the locations of the existing property lines for property takes contained herein. I have also set monuments at the proposed Property Corners, Section Corners and other points shown herein. The Centerline Monumentation called for herein will be set under my direct supervision during the construction of this project. This work will be done in accordance with OAC 4733-37 as cited below. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as Minimum Standards for Boundary Survey in the State of Ohio unless so noted. The words I and my as used herein are to mean that either myself or someone working for me under my direct control or supervision.

Richard F. Mathias
Richard F. Mathias, P.S., Ohio Lic.# 7798

SURVEYORS SEAL:

STATE OF OHIO
RICHARD F. MATHIAS
7798
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: Richard F. Mathias
DATE: 1-10-07

BASIS FOR BEARINGS:

BEARINGS ARE BASED UPON AN ASSUMED MERIDIAN AND ARE USED TO DELINEATE ANGLES ONLY

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

THE PROPOSED RIGHT OF WAY FOR U.S. 62 SHALL BE REFERENCED FROM THE PROPOSED CENTERLINE OF SURVEY & CONSTRUCTION OF S.R. 62.

THE PROPOSED RIGHT OF WAY FOR DUNCAN PLAINS ROAD SHALL BE REFERENCED FROM THE CENTERLINE OF R/W FOR DUNCAN PLAINS ROAD.

THE PLACING OF REFERENCE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO. MONUMENTST ARE TO BE PLACED AT THE SPECIFIED STATION AND OFFSETS. THE CONCRETE MONUMENTS REFERENCING THE CENTERLINE STATION POINT AND ANY REFERENCE MONUMENTS ARE TO BE SET BY THE RIGHT OF WAY DESIGN CONSULTANT.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN ON THIS PLAT, REQUIRES PRIOR APPROVAL OF THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR CENTERLNE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 OF THE OHIO DEPARTMENT OF TRANSPORTATION.

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 11-29-06

2 / 11

62-RCPLOGN

LIC-62-2.41

SECTIONS 17,18, 23 & 24, TOWNSHIP 3 N., RANGE 15 W.
MONROE TOWNSHIP, LICKING COUNTY

SECTION 17
SECTION 18

CLOVER VALLEY ROAD

END WORK
STA. 14+30

EASEMENTS ON FILE:
ELECTRIC - VOL. 580/18
PIPELINE - VOL. 528/146
ASSIGNMENT OF R.O.W. - VOL. 628/532
ASSIGNMENT OF R.O.W. - 646/292
LEASE AGREEMENT - L.B. 122/1
ASSIGNMENT AGREEMENT - L.B. 122/43
CROSS ACCESS AGREEMENT - INST. 200706010013826

EASEMENTS ON FILE:
RIGHT OF WAY - VOL. 707/559
RIGHT OF WAY - VOL. 707/562
RIGHT OF WAY - VOL. 441/183
RIGHT OF WAY - VOL. 606/575
PIPELINE - VOL. 441/223
ASSIGNMENT OF R.O.W. - VOL. 528/146
ASSIGNMENT - VOL. 628/532
ASSIGNMENT - 646/292
LEASE AGREEMENT - L.B. 122/1
ASSIGNMENT AGREEMENT - L.B. 122/43

SECTION 17
SECTION 24

(1) MARY K. CUTLIP
052-172722-00.000
13.000 ACRES
POLE LINE R.O.W. EASEMENT ON FILE
VOL. 580/19
VOL. 502/28

(4) JOE M. & TAMARA S. ENGLISH
A — 052-174918-00.000
2.00 ACRES
B — 052-172734-00.000
0.360 ACRES

(10) LARRY & BARBARA CONARD
052-172698-01.000
5.836 ACRES

(5) GEORGE D. & LINDA S. HOLBROOK
052-173676-01.000
1.515 ACRES

(5) 052-173676-01.002
1.147 ACRES

(5) 052-173676-01.001
1.770 ACRES

END PROJECT
STA. 146+15.00

END ACQUISITION
STA. 145+64.55

JOHN & KAREN PAGLIALUNGA
052-173028-00.003
2.512 ACRES
NO TAKE

(9) THE SAUYER COMPANY
052-173028-00.001
1.553 ACRES

(8) MARGARET A. WALKER
052-173028-00.000
1.818 ACRES

COMMUNICATION EASEMENT
OR 718/511
OR 178/512

(4) A

(7) THOMAS E. & SHIRLEY A. DAGUE
052-174924-00.000
2.881 ACRES

BEGIN ACQUISITION
STA. 128+20.00

BEGIN PROJECT
STA. 128+55.00

ELECTRIC TRANSMISSION
EASEMENT VOL. 728/793

(13) KELVIN L. & MARY L. DECOT
052-173994-01.000
1.227 ACRES

SECTION 18
SECTION 23

(6) BEECH CORNER, LTD
052-173730-00.000
7.240 ACRES

(3) B

BEGIN WORK
STA. 2+25.00

℄ U.S. 62

KIBER RUN

(3) A

ELECTRIC EASEMENT
D.V. 164, PG. 88

(11) WILLIAM B. & BARBARA MITCHELL
052-173730-02.000
2.002 ACRES
EASEMENT ON FILE:
ELECTRIC - D.V. 728, PG. 793

℄ DUNCANS PLAIN RD. (C.R. 33)

(12) 052-174822-00.000
1.000 ACRES

RICHARD D. BROWN
052-173460-05.003
2.365 ACRES
NO TAKE

(2) RICHARD D. & ROSALIND L. BROWN
052-173460-05.000
2.887 ACRES

(3) CHURCHES OF CHRIST IN CHRISTIAN UNION
A — 052-172738-00.000
1.500 ACRES
B — 052-174810-00.000
0.500 ACRES

CLOVER VALLEY ROAD

SECTION 24
SECTION 23

(12) MICHAEL E. & LAURA A. MOONEY
052-174828-00.000
4.107 ACRES

REV. BY	DATE	DESCRIPTION
NLC	6-19-07	ADDED ESMT. & PARCEL SPLIT TO 5
NLC	12-18-06	REVISED PARCELS 4-7, & 11

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 75711

R/W DESIGNER C.M.L.
R/W REVIEWER R.F.M.

PROPERTY MAP

LIC-62-2.41

3 / 11

76
84

TOTAL NUMBER OF :

0 TOTAL TAKES
13 OWNERSHIPS
25 PARCELS

0 OWNERSHIPS WITH "P" ITEMS
0 OWNERSHIPS WITH STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES (UNLESS OTHERWISE NOTED)

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD VOLUME	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED VOLUME	AS ACQUIRED PAGE
1-T	MARY K. CUTLIP	5-6	INST. #200402130005347		052-172722-00.000	13.000	0.750	0.045	0.000	0.045	NO			STATE	FOR GRADING		
2-WD	RICHARD D. & ROSALIND L. BROWN	5	OR 371	632	052-173460-05.000	2.887	0.171	0.049	0.037	0.012			2.704				
3-WD	CHURCHES OF CHRIST IN CHRISTIAN UNION	5-6	DB 621	204	052-172738-00.000	1.500	0.080	0.102	0.080	0.022			1.398				
			DB 77	157	052-174810-00.000	0.500	0.269	0.000	0.000	0.000			0.231		NO TAKE FROM THIS PARCEL		
	TOTAL					2.000	0.349	0.102	0.080	0.022			1.629				
4-WD	JOE M. & TAMARA S. ENGLISH	6,7 & 11	OR 661	890	052-174918-00.000	2.000	0.458	0.479	0.389	0.090							
4-WDV		11						0.080	0.069	0.011					T. B. A. IN THE NAME OF THE LICKING COUNTY COMMSSIONERS		
	TOTAL (052-174918-00.000)							0.559	0.458	0.101		1.441					
			OR 919	753	052-172734-00.000	0.360**	0.171	0.194	0.171	0.023		0.166			**AS SURVEYED AREA; 0.250 AUDITOR'S ACREAGE		
	TOTAL (4-WDV)							0.274	0.240	0.034							
4-T		7 & 11			052-174918-00.000			0.035	0.000	0.035					FOR GRADING & DRIVE CONSTRUCTION		
					052-172734-00.000			0.022	0.000	0.022	NO						
	TOTAL							0.057	0.000	0.057							
5-WD	GEORGE D. & LINDA S. HOLBROOK	7-8	INST. #200107020023688		052-173676-01.000	2.306Ⓐ	0.644	0.495	0.365	0.130	S				SIGN TO BE REMOVED		
5-WDV		7, 11						0.296	0.279	0.017					T. B. A. IN THE NAME OF THE LICKING COUNTY COMMSSIONERS		
	TOTAL					2.306Ⓐ	0.644	0.791	0.644	0.147		1.515			Ⓐ 2.306 = CALCULATED AREA, 1.515 = AUDITOR'S AREA		
5-T		11	INST. #200706010013826		052-173676-01.000	2.306 Ⓐ	0.000	0.055	0.000	0.055	NO				FOR GRADING & DRIVE CONSTRUCTION		
5-T1		8			052-173676-01.001	1.770	0.000	0.080	0.000	0.080					FOR GRADING & DRIVE CONSTRUCTION		
5-T3		7,11						0.089	0.000	0.089					FOR GRADING & DRIVE CONSTRUCTION		
	TOTAL					1.770	0.000	0.169	0.000	0.169							
5-T2		8			052-173676-01.002	1.147	0.000	0.053	0.000	0.053					FOR GRADING & DRIVE CONSTRUCTION		
6-WD	BEECH CORNER, LTD.	6-7	INST. #200011030035061		052-173730-00.000	7.240	0.815	0.539	0.418	0.121					EXISTING FENCE TO BE REMOVED		
6-WDV		7, 10						0.326	0.256	0.070					T. B. A. IN THE NAME OF THE LICKING COUNTY COMMSSIONERS		
	TOTAL					7.240	0.815	0.865	0.674	0.191			6.234				
6-T		6-7						0.101	0.000	0.101					FOR GRADING		
6-T1		10						0.018	0.000	0.018					FOR GRADING		
7-WD	THOMAS E. & SHIRLEY A. DAGUE	7 & 10	DB 496	362	052-174924-00.000	2.881	0.515	0.209	0.148	0.061							
7-WDV		9A, 10						0.462	0.367	0.095					T. B. A. IN THE NAME OF THE LICKING COUNTY COMMSSIONERS		
	TOTAL					2.881	0.515	0.671	0.515	0.156			2.210				
7-T		10						0.071	0.000	0.071					FOR GRADING		
7-T1		7						0.011	0.000	0.011					FOR GRADING		
8-WD	MARGARET A. WALKER	7-8	OR 691	313	052-173028-00.000	1.818	0.328	0.431	0.328	0.103			1.387				
8-T		7-8						0.022	0.000	0.022					FOR GRADING		
9-WD	THE SALYER COMPANY	8-9	INST. #200508050024146		052-173028-00.001	1.553	0.136	0.159	0.136	0.023			1.394				
10-WD	LARRY & BARBARA CONARD	8-9	INST. #200312110058350		052-172698-01.000	5.836	0.578	0.268	0.231	0.037		5.221					
10-T		9						0.003	0.000	0.003					FOR GRADING & DRIVE CONSTRUCTION		
11-WDV	WILLIAM B. & BARBARA MITCHELL	9A-10	INST. #200409270034834		052-173730-02.000	2.002	0.150	0.184	0.150	0.034		1.818			T. B. A. IN THE NAME OF THE LICKING COUNTY COMMSSIONERS		
11-T		9A-10						0.005	0.000	0.005					FOR GRADING		
12-T	MICHAEL E. & LAURA A. MOONEY	9A	OR 534	665	052-174822-00.000	1.000	0.137	0.006	0.000	0.006					FOR GRADING		
					052-174828-00.000	4.107	0.143	0.000	0.000	0.000					NO TAKE FROM THIS PARCEL		
13-T	KELVIN L. & MARY L. DECOT	9A	INST. #200406010019687		052-173994-01.000	1.227	0.101	0.003	0.000	0.003	NO			STATE	FOR GRADING		

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO UNLESS OTHERWISE SHOWN.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

* DENOTES RIGHT OF WAY ENCROACHMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTHS DURATION.

LEGEND:
WD = WARRANTY DEED
T = TEMPORARY

REV. BY	DATE	DESCRIPTION
CML	7-3-07	REV. RECORD AREA OF PARCEL 5
NLC	6-19-07	REV. 5-T & 5-T1, ADDED 5-T2, 5-T3
NLC	12-18-06	ADDED 4-WDV , 5-WDV , 6-WDV , & 7-WDV

FIELD REVIEW BY: CML DATE: 11-16-06
OWNERSHIP VERIFIED BY: CML DATE: 11-15-06
DATE COMPLETED: 11-29-06

FEDERAL PROJECT NO.

PID NO. 75711

STATE JOB NO. 455961

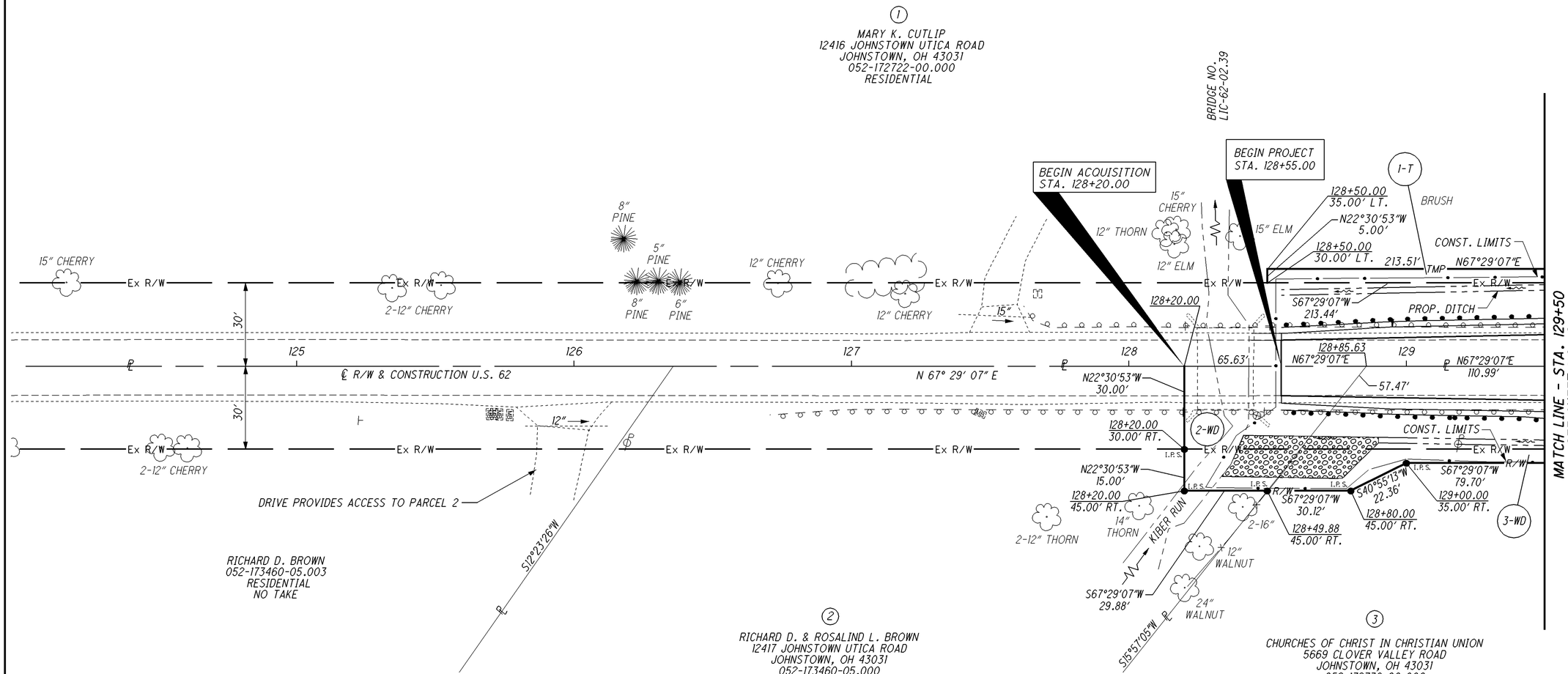
R/W DESIGNER N.L.C.
R/W REVIEWED R.F.M.

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 1-13)

LIC-62-2.41

SUMMARY.DGN

LICKING COUNTY
MONROE TOWNSHIP
SEC. 24, T. 3 N., R. 15 W.



REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 11-29-06

62-RDS1.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 75711

CALCULATED NLC
CHECKED AFM

RIGHT OF WAY DETAIL SHEET - U.S. 62
STA. 124+20 TO STA. 129+50

LIC-62-2.41

5 / 11

78
84

C2
△ = 00°34′24″ LT.
Dc = 00°09′03″
R = 38000.00′
T = 190.10′
L = 380.19′
E = 0.48′
Ch = S67°31′47″W
380.19′

C3
△ = 00°33′37″ RT.
Dc = 00°09′03″
R = 38000.00′
T = 185.76′
L = 371.52′
E = 0.45′
Ch = N67°31′23″E
371.52′

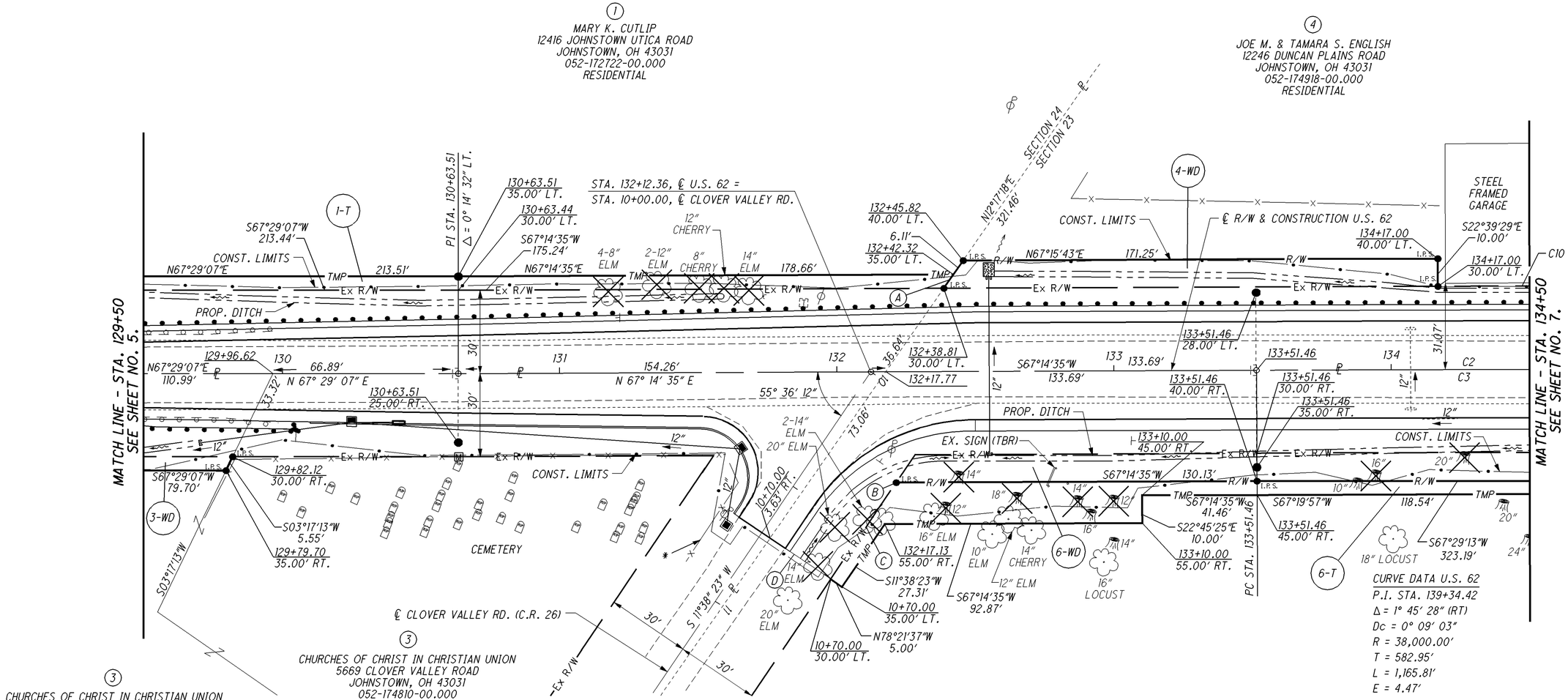
C10
△ = 00°06′36″ RT.
Dc = 00°09′02″
R = 38030.00′
T = 36.53′
L = 73.06′
E = 0.02′
Ch = N67°23′49″E
73.06′

LICKING COUNTY
MONROE TOWNSHIP
SEC. 23 & 24, T. 3 N., R. 15 W.

(A) S12°17′18″W, 6.11′
(B) 132+21.34, 40.00′ RT.
(C) S11°38′23″W, 42.06′
(D) N78°21′37″W, 26.37′

(1)
MARY K. CUTLIP
12416 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-172722-00.000
RESIDENTIAL

(4)
JOE M. & TAMARA S. ENGLISH
12246 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-174918-00.000
RESIDENTIAL



(3)
CHURCHES OF CHRIST IN CHRISTIAN UNION
5669 CLOVER VALLEY ROAD
JOHNSTOWN, OH 43031
052-172738-00.000
COMMERCIAL

(3)
CHURCHES OF CHRIST IN CHRISTIAN UNION
5669 CLOVER VALLEY ROAD
JOHNSTOWN, OH 43031
052-174810-00.000
BURIAL GROUND
NO TAKE FROM THIS PARCEL

(6)
BEECH CORNER, LTD.
11689 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-173730-00.000
COMMERCIAL

* DENOTES ENCROACHMENT

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 11-29-06

62-ROS2.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 75711

CALCULATED NLC
CHECKED AFM

RIGHT OF WAY DETAIL SHEET - U.S. 62
STA. 129+50 TO STA. 134+50

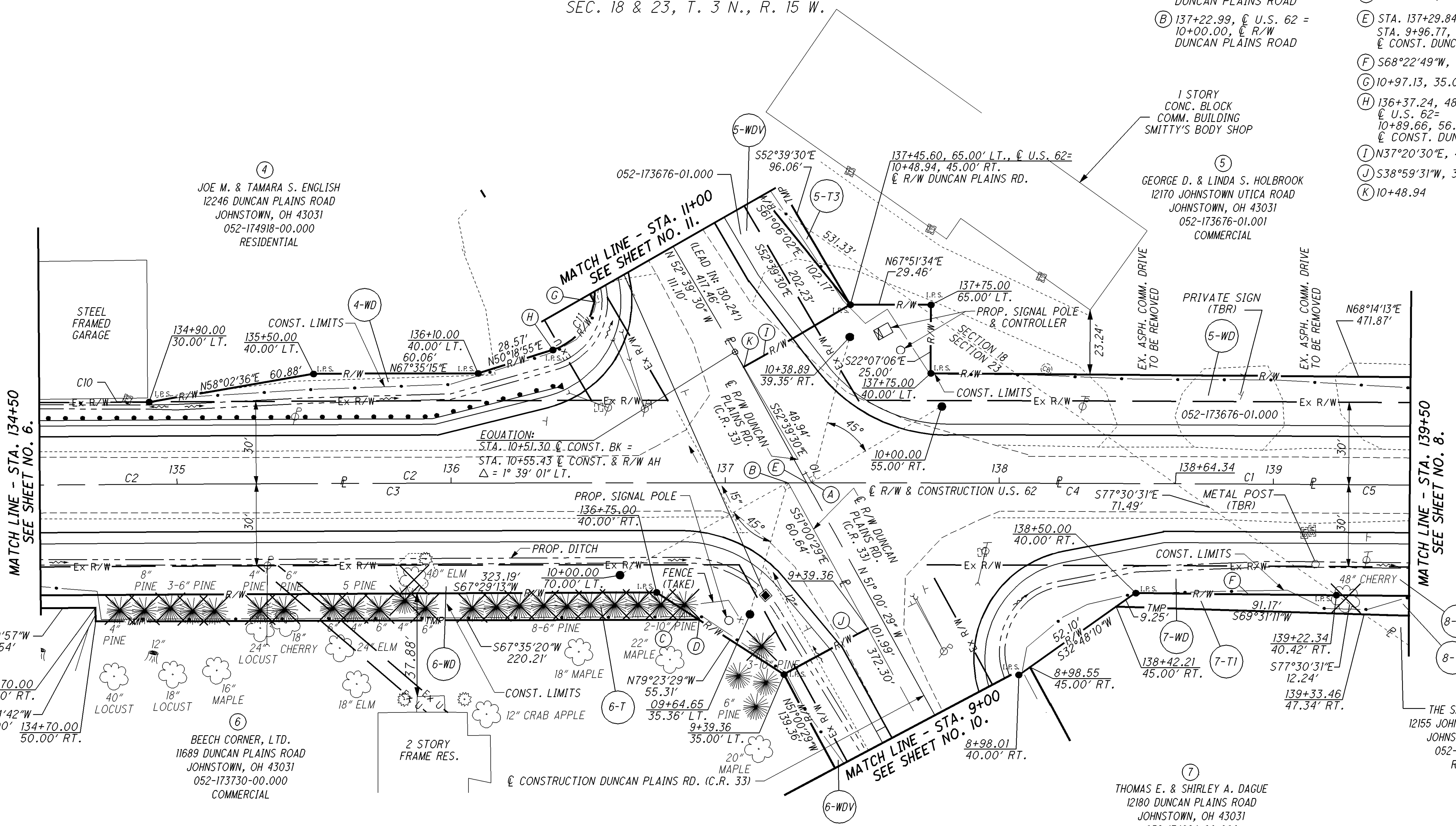
LIC-62-2.41

6 / 11

79
84

LICKING COUNTY
MONROE TOWNSHIP
SEC. 18 & 23, T. 3 N., R. 15 W.

(A)	137+31.66, ℄ U.S. 62 = 9+95.89, 1.60' RT. DUNCAN PLAINS ROAD
(B)	137+22.99, ℄ U.S. 62 = 10+00.00, ℄ R/W DUNCAN PLAINS ROAD
(C)	S79°23'29"E, 18.43'
(D)	136+90.50, 50.00' RT.
(E)	STA. 137+29.84, ℄ U.S. 62 = STA. 9+96.77, ℄ CONST. DUNCAN PLAINS RD.
(F)	S68°22'49"W, 73.27'
(G)	10+97.13, 35.00' LT.
(H)	136+37.24, 48.51' LT. ℄ U.S. 62= 10+89.66, 56.94' LT. ℄ CONST. DUNCAN PLAINS RD.
(I)	N37°20'30"E, 45.00'
(J)	S38°59'31"W, 35.00'
(K)	10+48.94



MATCH LINE - STA. 134+50 SEE SHEET NO. 6.
MATCH LINE - STA. 11+00 SEE SHEET NO. 11.
MATCH LINE - STA. 9+00 SEE SHEET NO. 10.
MATCH LINE - STA. 139+50 SEE SHEET NO. 8.
4
JOE M. & TAMARA S. ENGLISH
12246 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-174918-00.000
RESIDENTIAL
5
GEORGE D. & LINDA S. HOLBROOK
12170 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173676-01.001
COMMERCIAL
6
BEECH CORNER, LTD.
11689 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-173730-00.000
COMMERCIAL
7
THOMAS E. & SHIRLEY A. DAGUE
12180 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-174924-00.000
RESIDENTIAL
8
THE SALYER COMPANY
12155 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173028-00.001
RESIDENTIAL
1 STORY CONC. BLOCK COMM. BUILDING SMITTY'S BODY SHOP
STEEL FRAMED GARAGE
2 STORY FRAME RES.
052-173676-01.000
137+45.60, 65.00' LT., ℄ U.S. 62= 10+48.94, 45.00' RT. ℄ R/W DUNCAN PLAINS RD.
EQUATION: STA. 10+51.30 ℄ CONST. BK = STA. 10+55.43 ℄ CONST. & R/W AH △ = 1° 39' 01" LT.
℄ R/W & CONSTRUCTION U.S. 62
℄ CONSTRUCTION DUNCAN PLAINS RD. (C.R. 33)
℄ R/W DUNCAN PLAINS RD. (C.R. 33)
PROP. SIGNAL POLE & CONTROLLER
PROP. SIGNAL POLE
PROP. DITCH
CONST. LIMITS
PRIVATE SIGN (TBR)
METAL POST (TBR)
FENCE (TAKE)
EX. ASPH. COMM. DRIVE TO BE REMOVED
SECTION 18
SECTION 23
5-WDV
5-T3
4-WD
5-WD
6-WD
6-T
6-WDV
7-WD
7-T1
8-WD
8-T

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ= 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

	C1	C2	C3	C4	C5	C10	C11
△	00°44'09" LT.	00°34'24" LT.	00°33'37" RT.	00°12'47" RT.	00°45'19" RT.	00°09'36" RT.	102°58'25" LT.
Dc	00°09'03"	00°09'03"	00°09'03"	00°09'03"	00°09'03"	00°09'02"	260°26'07"
R	38000.00'	38000.00'	38000.00'	38000.00'	38000.00'	38030.00'	22.00'
T	244.01'	190.10'	185.76	70.68'	250.45'	36.53'	27.64'
L	488.02'	380.19'	371.52'	141.36'	500.89'	73.06'	39.54'
E	0.78'	0.48'	0.45'	0.07'	0.83'	0.02'	13.33'
Ch	S68°11'03"W 488.02'	S67°31'47"W 380.19'	N67°31'23"E 371.52'	N67°54'35"E 141.36'	N68°23'38"E 500.89'	N67°23'49"E 73.06'	N01°10'18"W 34.43'

NOTE:
THE PROPOSED RIGHT OF WAY FOR DUNCAN PLAINS ROAD SHALL BE REFERENCED FROM THE CENTERLINE OF R/W FOR DUNCAN PLAINS ROAD

REV. BY	DATE	DESCRIPTION
CML	7-3-07	ADDED PARCEL NO. TO PARCELS 5-WD & 5-WDV.
NLC	6-19-07	ADDED 5-T3
NLC	01-23-07	REVISED CHORD BEARING ON C1
NLC	12-18-06	ADDED 5-WDV,6-WDV,REV. 4-WD & 7-WD

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 75711

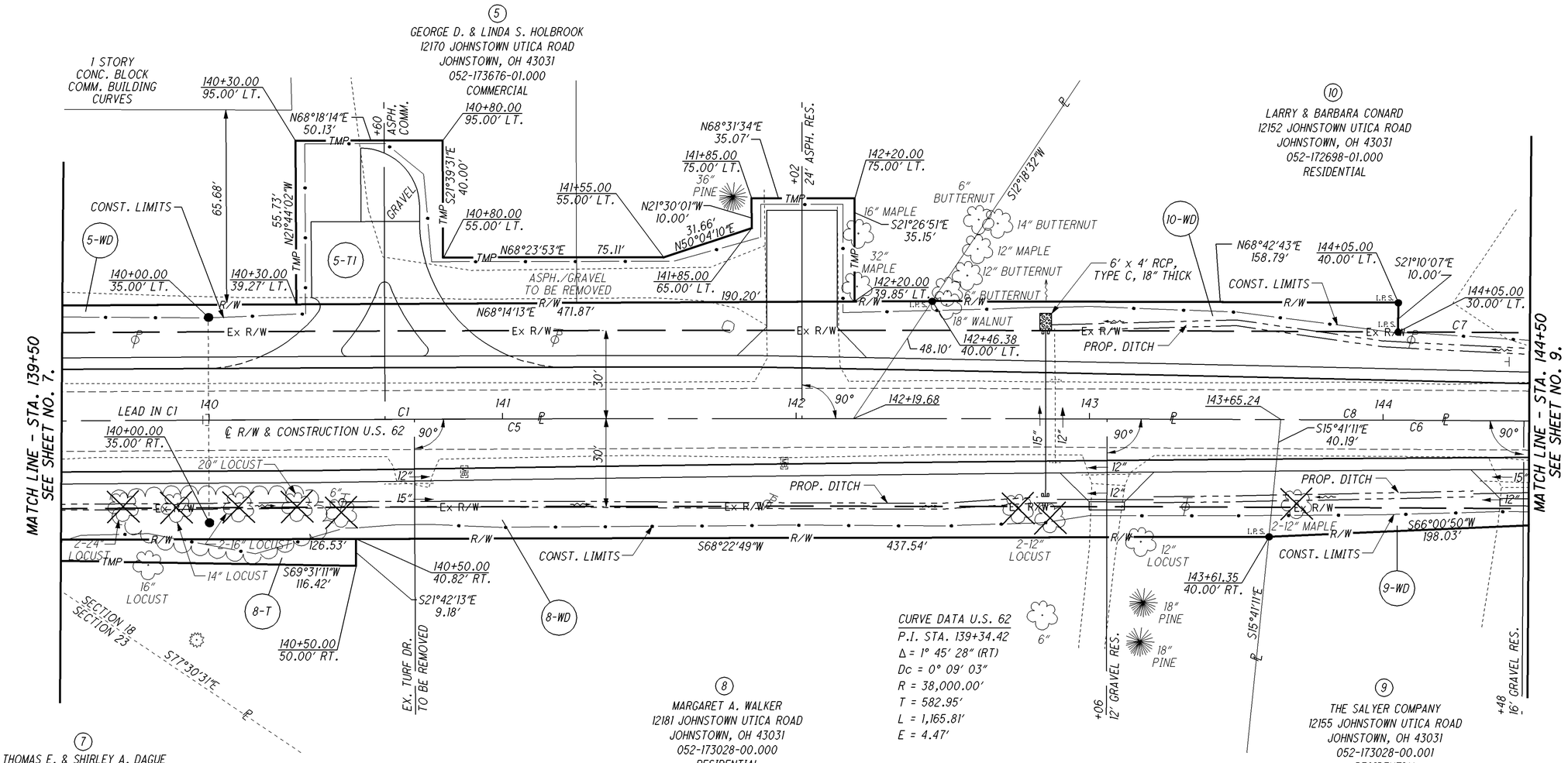
CALCULATED NLC CHECKED RFM

RIGHT OF WAY DETAIL SHEET - U.S. 62 STA. 134+50 TO STA. 139+50

LIC-62-2.41

62-RDS3.DGN

LICKING COUNTY
MONROE TOWNSHIP
SEC. 18 & 23, T. 3 N., R. 15 W.



(7) THOMAS E. & SHIRLEY A. DAGUE
12180 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-174924-00.000
RESIDENTIAL

(8) MARGARET A. WALKER
12181 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173028-00.000
RESIDENTIAL

(9) THE SALYER COMPANY
12155 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173028-00.001
RESIDENTIAL

(10) LARRY & BARBARA CONARD
12152 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-172698-01.000
RESIDENTIAL

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

C1
Δ = 00°44'09" LT.
Dc = 00°09'03"
R = 38000.00'
T = 244.01'
L = 488.02'
E = 0.78'
Ch = S68°33'08"W 488.02'

C5
Δ = 00°45'19" RT.
Dc = 00°09'03"
R = 38000.00'
T = 250.45'
L = 500.89'
E = 0.83'
Ch = N68°23'38"E 500.89'

C6
Δ = 00°13'45" RT.
Dc = 00°09'03"
R = 38000.00'
T = 76.02'
L = 152.04'
E = 0.08'
Ch = N68°53'10"E 152.04'

C7
Δ = 00°10'09" RT.
Dc = 00°09'02"
R = 38030.00'
T = 56.18'
L = 112.37'
E = 0.04'
Ch = N68°54'58"E 112.37'

C8
Δ = 00°26'55" LT.
Dc = 00°09'03"
R = 38000.00'
T = 148.80'
L = 297.59'
E = 0.29'
Ch = S68°46'35"W 297.59'

LEAD IN C1 (10-WD)
Δ = 00°32'09" RT.
Dc = 00°09'03"
R = 38000.00'
T = 177.67'
L = 355.34
E = 0.42'
Ch = N68°17'03"E 355.34'

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 75711
CALCULATED NLC
CHECKED AFM

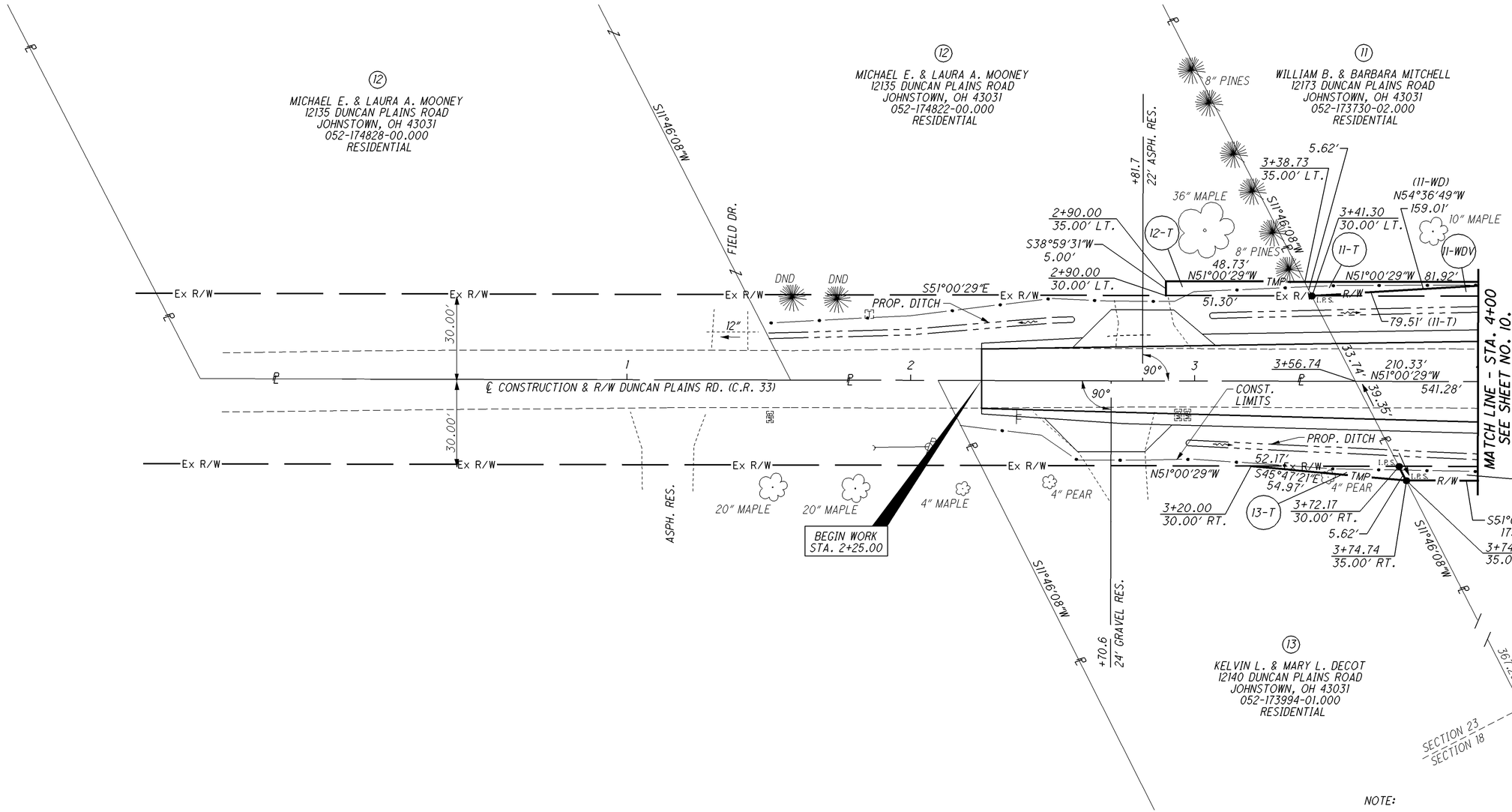
RIGHT OF WAY DETAIL SHEET - U.S. 62
STA. 139+50 TO STA. 144+50

LIC-62-2.41

8 / 11
81
84

62-RDS4.DGN

LICKING COUNTY
MONROE TOWNSHIP
SEC. 23, T. 3 N., R. 15 W.



NOTE:

THE PROPOSED RIGHT OF WAY FOR DUNCAN PLAINS ROAD SHALL BE REFERENCED FROM THE CENTERLINE OF R/W FOR DUNCAN PLAINS ROAD.

REV. BY	DATE	DESCRIPTION
NLC	12-18-06	ADDED 7-WDV & 11-WDV

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CML
CHECKED RPM

RIGHT OF WAY DETAIL SHEET-DUNCAN PLAINS
STA. 2+25 TO STA. 4+00

LIC-62-2.41

9A / 11

82A
84

DUNCAN-RDSA.DGN

C6
△ = 00°13'45" RT.
Dc = 00°09'03"
R = 38000.00'
T = 76.02'
L = 152.04'
E = 0.08'
Ch = N68°53'10"E
152.04'

C7
△ = 00°10'09" RT.
Dc = 00°09'02"
R = 38030.00'
T = 56.18'
L = 112.37'
E = 0.04'
Ch = N68°54'58"E
112.37'

C8
△ = 00°26'55" LT.
Dc = 00°09'03"
R = 38000.00'
T = 148.80'
L = 297.59'
E = 0.29'
Ch = S68°46'35"W
297.59'

C9
△ = 00°02'43" LT.
Dc = 00°09'02"
R = 38030.00'
T = 15.01'
L = 30.02'
E = 0.00'
Ch = S68°55'46"W
30.02'

LICKING COUNTY
MONROE TOWNSHIP
SEC. 18, T. 3 N., R. 15 W.

(A) S21°02'52"E, 5.00'
(B) 144+85.00, 30.00' LT.

(10)
LARRY & BARBARA CONARD
12152 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-172698-01.000
RESIDENTIAL

END PROJECT
STA. 146+15.00

℄ R/W & CONSTRUCTION U.S. 62

CULTIVATED

+70 20' GRAVEL RES.

N68°55'46"E
30.03'

10-WD

10-T

144+55.00
35.00' LT.

144+85.00
35.00' LT.

145+17.28
30.00' LT.

145+64.55
30.00' LT.

CONST. LIMITS
47.27'
N69°00'03"E

S20°59'57"E
30.00'

N21°05'35"W
5.00'

144+55.00
30.00' LT.

TMP

C9

A

B

Ex R/W

C7

I.P.S.

PR. DITCH

2.5'

9.7'

10.6'

2.5'

90°

C6

145

C8

145+17.28

145+17.28
28.00' LT.

145+64.55

146

147

148

149

N 69° 00' 03" E

30'

CONST. LIMITS

MATCH LINE - STA. 144+50
SEE SHEET NO. 8.

12"

15"

15"

15"

Ex R/W

S66°00'50"W
198.03'

9-WD

145+59.28
30.00' RT

145+17.28
28.00' RT.

I.P.S.

S11°02'43"E
30.46'

END ACQUISITION
STA. 145+64.55

PT STA. 145+17.28

S11°02'43"E

S08°10'31"E

2"
MAPLE

10'8

CURVE DATA U.S. 62
P.I. STA. 139+34.42
Δ = 1° 45' 28" (RT)
Dc = 0° 09' 03"
R = 38,000.00'
T = 582.95'
L = 1,165.81'
E = 4.47'

(9)
THE SALYER COMPANY
12155 and 12159 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173028-00.001
RESIDENTIAL

REV. BY	DATE	DESCRIPTION
NLC	12-18-06	REVISED OFFSET ON CENTERLINE MON.

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CML
CHECKED AFM

RIGHT OF WAY DETAIL SHEET - U.S. 62
STA. 144+50 TO STA. 149+80

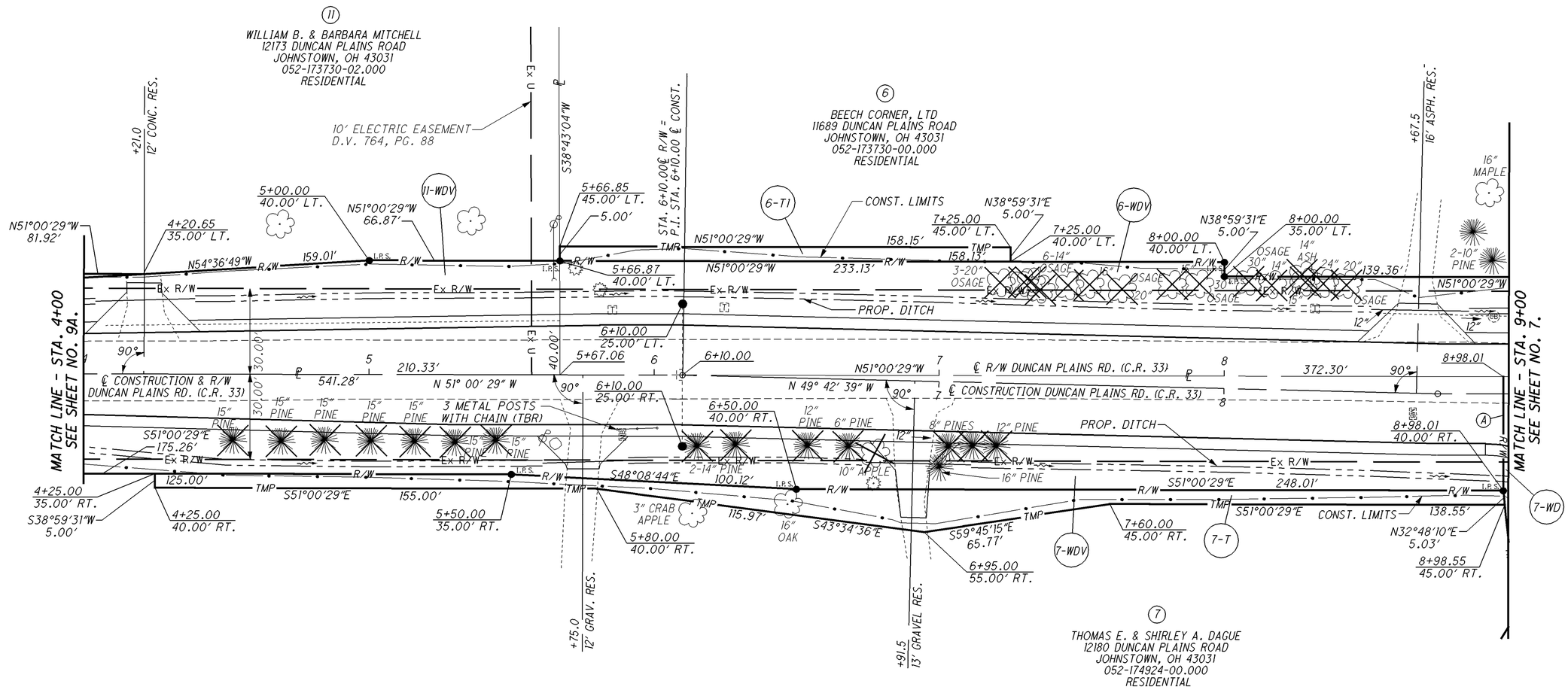
LIC-62-2.41

9 / 11

82
84

62-RDS5.dgn

LICKING COUNTY
MONROE TOWNSHIP
SEC. 23, T. 3 N., R. 15 W.



NOTE:

THE PROPOSED RIGHT OF WAY FOR DUNCAN PLAINS ROAD SHALL BE REFERENCED FROM THE CENTERLINE OF R/W FOR DUNCAN PLAINS ROAD.

REV. BY	DATE	DESCRIPTION
NLC	12-18-06	ADDED 6-WDV, 7-WDV, & 11-WDV

DATE COMPLETED: 11-29-06

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CML
CHECKED RPM

RIGHT OF WAY DETAIL SHEET-DUNCAN PLAINS
STA. 4+00 TO STA. 9+00

LIC-62-2.41

10 / 11

83
84

DUNCAN-RDS1.DGN

LICKING COUNTY
MONROE TOWNSHIP
SEC. 17,18,23 & 24, T. 3 N., R. 15 W

(A) S37°20'30"W, 5.00'
(B) 11+11.10, 30.00' LT.
(C) N52°39'30"W, 43.90'
(D) 11+55.00, 30.00' LT.
(E) 11+33.00, 35.00' LT.
(F) 11+55.00, 35.00' LT.
(G) N37°20'30"E, 30.00'

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CML
CHECKED RFM

RIGHT OF WAY DETAIL SHEET-DUNCAN PLAINS
STA. 11+00 TO STA. 16+60

LIC-62-2.41

MATCH LINE - STA. 11+00
SEE SHEET NO. 7.

(4) JOE M. & TAMARA S. ENGLISH
12246 DUNCAN PLAINS ROAD
JOHNSTOWN, OH 43031
052-174918-00.000
COMMERCIAL

(4) 052-172734-00.00

LARRY E. & BARBARA CONARD
12152 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-1726980-01.000
RESIDENTIAL

(5) GEORGE D. & LINDA S. HOLBROOK
12170 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173676-01.001
COMMERCIAL

(5) GEORGE D. & LINDA S. HOLBROOK
12170 JOHNSTOWN UTICA ROAD
JOHNSTOWN, OH 43031
052-173676-01.000
COMMERCIAL

℄ CONSTRUCTION & R/W
DUNCAN PLAINS RD. (C.R. 33)

℄ CLOVER VALLEY RD.
(C.R. 26)

SECTION 24
SECTION 23
SECTION 18
SECTION 17
SECTION 18

END WORK
STA. 14+30.00

CONST. LIMITS

PROP. DITCH

RAILROAD SPIKE

2 STORY BRICK NO. 12152

ISTORY CONCRETE BLOCK NO. 12170 SMITTY'S BODY SHOP

ISTORY CONCRETE BLOCK NO. 12170 HORSE WORLD & LEWIS AUTO

AMERICAN PORTABLE TELECOM INC.

CROSS ACCESS AGREEMENT INST. # 200706010013826

C12
△ = 39°24'02" RT.
Dc = 260°26'07"
R = 22.00'
T = 7.88'
L = 15.13'
E = 1.37'
Ch = S32°57'29"E
14.83'

REV. BY	DATE	DESCRIPTION
CML	7-3-07	ADDED PARCEL BALLOON & NO. TO 5-WDV & INST. NO. CROSS AGGREEMENT.
NLC	6-19-07	ADDED 5-T3 & ACCESS AGREEMENT
NLC	12-18-06	ADDED 4-WDV & 5-WDV

DATE COMPLETED: 11-29-06

11 / 11

84
84

DUNCAN-RDS2.dgn

PROJECT DESCRIPTION

THE PROJECT INVOLVES THE IMPROVEMENT OF THE INTERSECTION OF SR 62 AND CR 33, DUNGAN PLAINS RD.

GEOLOGY AND OBSERVATIONS

THE PROJECT SITE IS LOCATED IN THE GENTLY ROLLING, GLACIATED GALION LOW PLATEAU, IN AN AREA WHERE MODERATELY DEEP GLACIAL DEPOSITED MATERIALS OVERLIE SHALES AND SANDSTONES OF MISSISSIPPIAN AGED.

SUBSURFACE EXPLORATION

THE EXPLORATION CONSISTED OF DRILLING SEVEN SOIL BORINGS, MADE BY MEANS OF MECHANICALLY-POWERED HOLLOW-STEM ROTARY AUGER MOUNTED ON A TRUCK PLATFORM PERFORMED BETWEEN JUNE 7 AND 8, 2004.

EXPLORATION FINDINGS

THE BORINGS ENCOUNTERED PREDOMINATELY GRANULAR SOILS. GRANULAR SOILS ENCOUNTERED RANGED FROM SANDY SILT (A-4A), GRAVEL, WITH SAND AND SILT (A-2-4) AND GRAVEL WITH SAND (A-1-B). THESE SOILS WERE GENERALLY LOOSE TO MEDIUM DENSE IN COMPACTNESS. SANDY CLAY (A-6A) WAS ENCOUNTERED BORINGS B-1 AND B-2 WHICH WAS VERY STIFF AND MOISTURE CONTENTS JUST BELOW TO ABOVE THE PLASTIC LIMIT. WATER WAS NOTED AT COMPLETION IN ONLY BORING B-6 AT A DEPTH OF 8 FEET, ELEVATION 1109.7 FEET. THE REMAINING BORINGS WERE DRY AT COMPLETION. BEDROCK WAS NOT ENCOUNTERED IN THE BORINGS.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS - 31 SAMPLES TESTED

DESCRIPTION	ODOT CLASS	% AGG.	% C.SAND	% F.SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTIC. INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b (0)*	*46*	*24*	*12*	*14*	*4*	*NP*	*NP*	*15*	*2*
GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	*A-2-4 (0)*	*40*	*16*	*12*	*22*	*10*	*NP*	*NP*	*13*	*4*
SANDY SILT	*A-4a (5)*	*15*	*9*	*15*	*37*	*24*	*NP*	*NP*	*16*	*22*
SILT AND CLAY	*A-6a (8)*	*9*	*8*	*14*	*36*	*33*	*31*	*15*	*16*	*2*
		VISUAL CLASSIFICATION								*1*

BORING LOCATION - PLAN VIEW

DRIVE SAMPLE & CORE BORING PLOTTED TO VERTICAL SCALE ONLY

X/Y/Z NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
X= NUMBER OF BLOWS FOR FIRST 6 INCHES
Y= NUMBER OF BLOWS FOR SECOND 6 INCHES
Z= NUMBER OF BLOWS FOR THIRD 6 INCHES

PAVEMENT AND/OR BASE = X = APPROXIMATE DEPTH

INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT

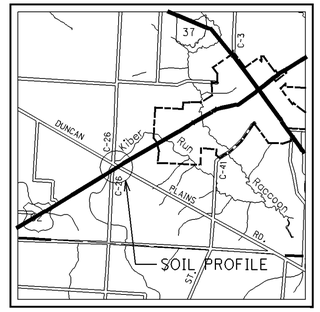
W INDICATES FREE WATER ELEVATION

NP INDICATES A NON-PLASTIC MATERIAL

* DENOTES SAMPLE TAKEN AT OR NEAR GRADE

FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT (e.g. *15*)

LICKING COUNTY



LOCATION MAP

DRILLING - DML 6/7-8/04
DRAWN - JBH 12/06
REVIEWED - BKL 12/06

SUMMARY OF SOIL TEST DATA

U.S. 62

STATION & OFFSET	FROM TO	AGG	CS	FS	SILT	CLAY	LL	PI	WC	OHIO CLASS	
B-1	*01.00-02.50*	*BROWN SILT & CLAY W/ST. & ASPHALT FRAGS. & BOULDERS*							*1*	*VISUAL*	*
128+88, 6' RT.	*03.50-05.00*	*41*	*12*	*13*	*24*	*10*	*23*	*6*	*11*	*A-2-4*	
	06.00-07.50	*27*	*9*	*15*	*32*	*17*	*23*	*7*	*12*	*A-4a*	
	08.50-10.00	*13*	*9*	*17*	*37*	*24*	*31*	*15*	*12*	*A-6a*	
B-2	*01.50-03.00*	*6*	*7*	*11*	*34*	*42*	*31*	*15*	*19*	*A-6a*	*
132+53, 7' RT.	*03.50-05.00*	*8*	*10*	*16*	*38*	*28*	*26*	*10*	*16*	*A-4a*	
	06.00-07.50	*8*	*10*	*16*	*38*	*28*	*NP*	*NP*	*15*	*A-4a*	
	08.50-10.00	*35*	*9*	*16*	*26*	*14*	*NP*	*NP*	*14*	*A-4a*	
B-3	*01.50-03.00*	*6*	*8*	*14*	*38*	*34*	*NP*	*NP*	*16*	*A-4a*	*
136+88, 8' RT.	*03.50-05.00*	*15*	*7*	*14*	*37*	*27*	*26*	*9*	*19*	*A-4a*	
	06.00-07.50	*12*	*10*	*16*	*39*	*23*	*NP*	*NP*	*14*	*A-4a*	
	08.50-10.00	*12*	*8*	*14*	*40*	*26*	*NP*	*NP*	*12*	*A-4a*	
	11.00-12.50	*13*	*8*	*17*	*47*	*15*	*NP*	*NP*	*17*	*A-4a*	
B-4	*01.50-03.00*	*10*	*7*	*16*	*46*	*21*	*NP*	*NP*	*16*	*A-4a*	*
141+98, 7' RT.	*03.50-05.00*	*9*	*8*	*14*	*39*	*30*	*NP*	*NP*	*18*	*A-4a*	
	06.00-07.50	*17*	*5*	*13*	*36*	*29*	*NP*	*NP*	*19*	*A-4a*	
	08.50-10.00	*10*	*7*	*16*	*40*	*27*	*NP*	*NP*	*17*	*A-4a*	
B-5	*01.50-03.00*	*17*	*12*	*15*	*33*	*23*	*NP*	*NP*	*17*	*A-4a*	*
146+23, 7' RT.	*03.50-05.00*	*22*	*7*	*13*	*39*	*19*	*26*	*8*	*17*	*A-4a*	
	06.00-07.50	*33*	*21*	*11*	*23*	*12*	*NP*	*NP*	*15*	*A-2-4*	
	08.50-10.00	*46*	*14*	*13*	*21*	*6*	*NP*	*NP*	*10*	*A-2-4*	

CR 33 - DUCAN PLAINS RD.

B-6	*01.50-03.00*	*10*	*9*	*21*	*47*	*13*	*NP*	*NP*	*13*	*A-4a*	*
13+13, 4' LT.	*03.50-05.00*	*16*	*8*	*17*	*35*	*24*	*NP*	*NP*	*21*	*A-4a*	
	06.00-07.50	*37*	*18*	*13*	*22*	*10*	*NP*	*NP*	*15*	*A-2-4*	
	08.50-10.00	*39*	*33*	*13*	*12*	*3*	*NP*	*NP*	*18*	*A-1-b*	
	11.00-12.50	*51*	*16*	*12*	*17*	*4*	*NP*	*NP*	*12*	*A-1-b*	
B-7	*01.50-03.00*	*11*	*10*	*14*	*35*	*30*	*NP*	*NP*	*20*	*A-4a*	*
8+13, 1' RT. (OF PROP. ℄)	*03.50-05.00*	*16*	*10*	*11*	*35*	*28*	*26*	*8*	*14*	*A-4a*	
	06.00-07.50	*23*	*17*	*11*	*30*	*19*	*NP*	*NP*	*14*	*A-4a*	
	08.50-10.00	*12*	*14*	*16*	*33*	*25*	*21*	*7*	*11*	*A-4a*	
	11.00-12.50	*17*	*11*	*15*	*38*	*19*	*21*	*6*	*11*	*A-4a*	

NOTE:

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET AND/OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL ENGINEERING
1600 W. BROAD ST. COLUMBUS, OH 43223

PID NO. 75711

SOIL PROFILE

LIC-62-2.41

$TIME$
$DATE$
$FILE$

CR 33 (DUCAN PLAINS RD.)

BEGIN PROJECT
STA. 128+55.00

EQUATION:
Sta 10+57.30 BK =
Sta 10+55.43 AH

MATCHLINE STA. 141+00

U.S. 62

B-1
6.0' RT
ASPHALT = 1.0"
6/7/9 11 W/ BOULDERS
5/4/5 11 W/ BOULDERS
12/9/5 12 W/ BOULDERS
6/12/13 12

B-2
7.0' RT.
ASPHALT = 1.0"
5/7/8 19
4/5/6 16
4/5/7 15
9/7/5 14 W/ BOULDERS

B-3
8.0' RT.
ASPHALT = 1.0"
6/7/6 16
3/3/3 19
4/5/6 14
5/8/9 12
8/10/11 11

HORIZONTAL SCALE IN FEET
0 25 50 100

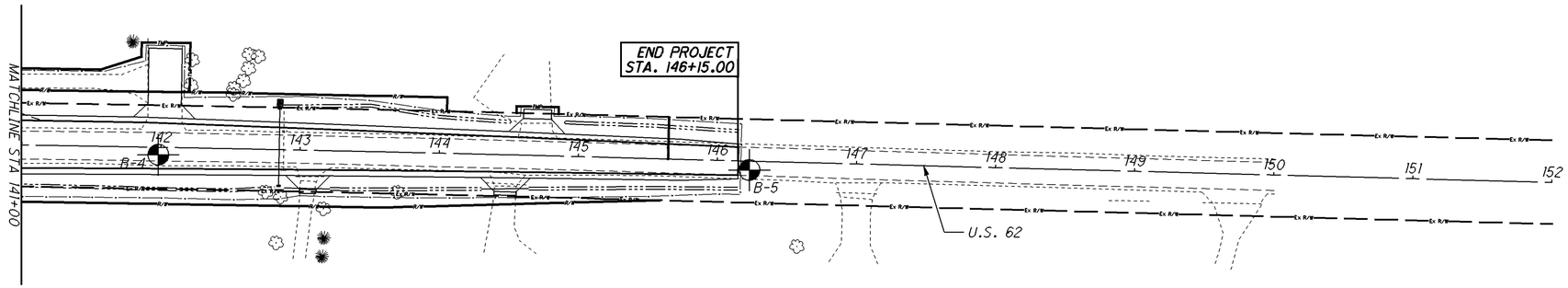
DRAWN JBH
CHECKED BKL

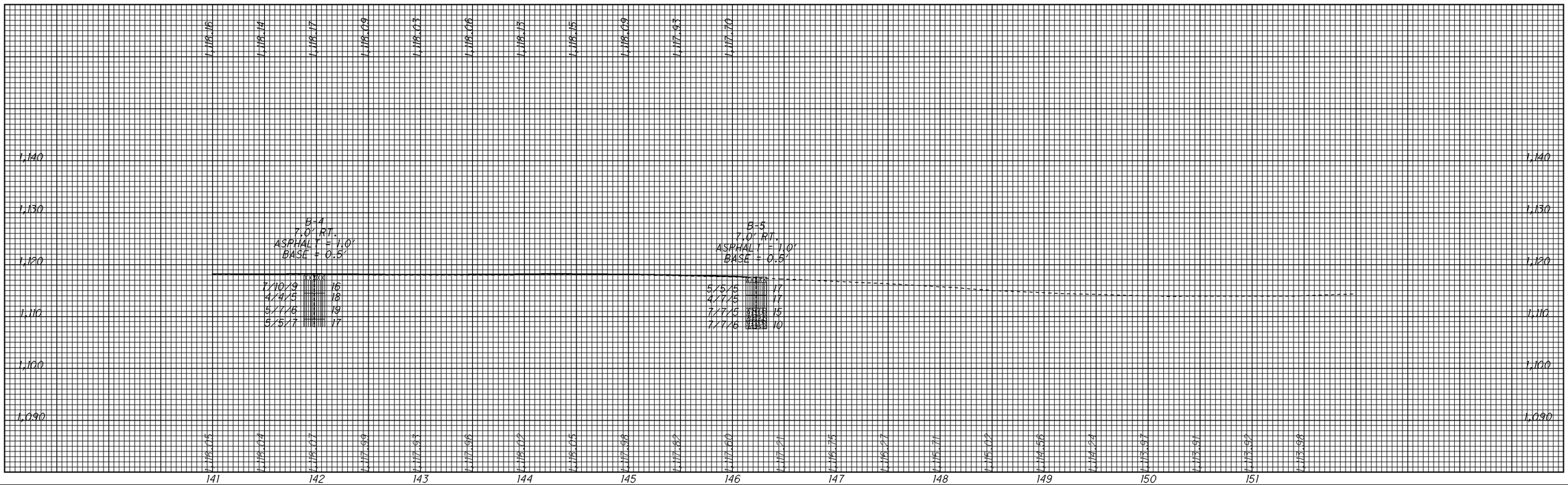
SOIL PROFILE
STA. 128+00 TO 141+00 U.S. 62

LIC-62-2.41

2 / 4

$TIME$
$DATE$
$FILE$





$DATE$
$FILE$
$TIME$

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN JBH
CHECKED BKL

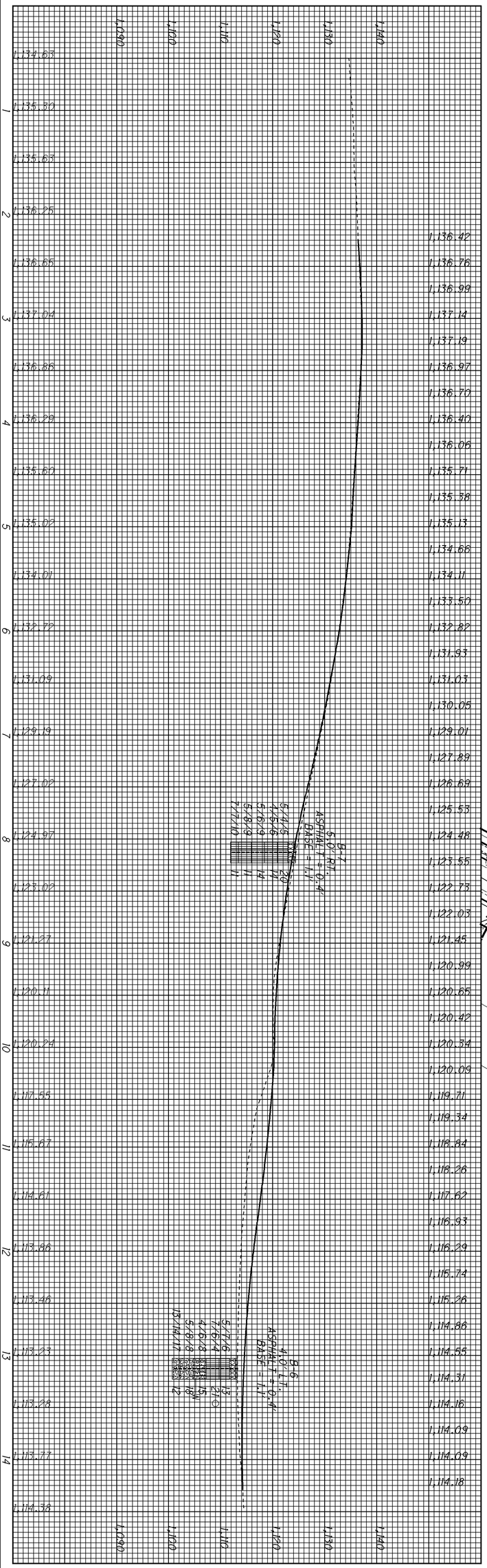
SOIL PROFILE
STA. 138+00 TO 151+00 U.S. 62

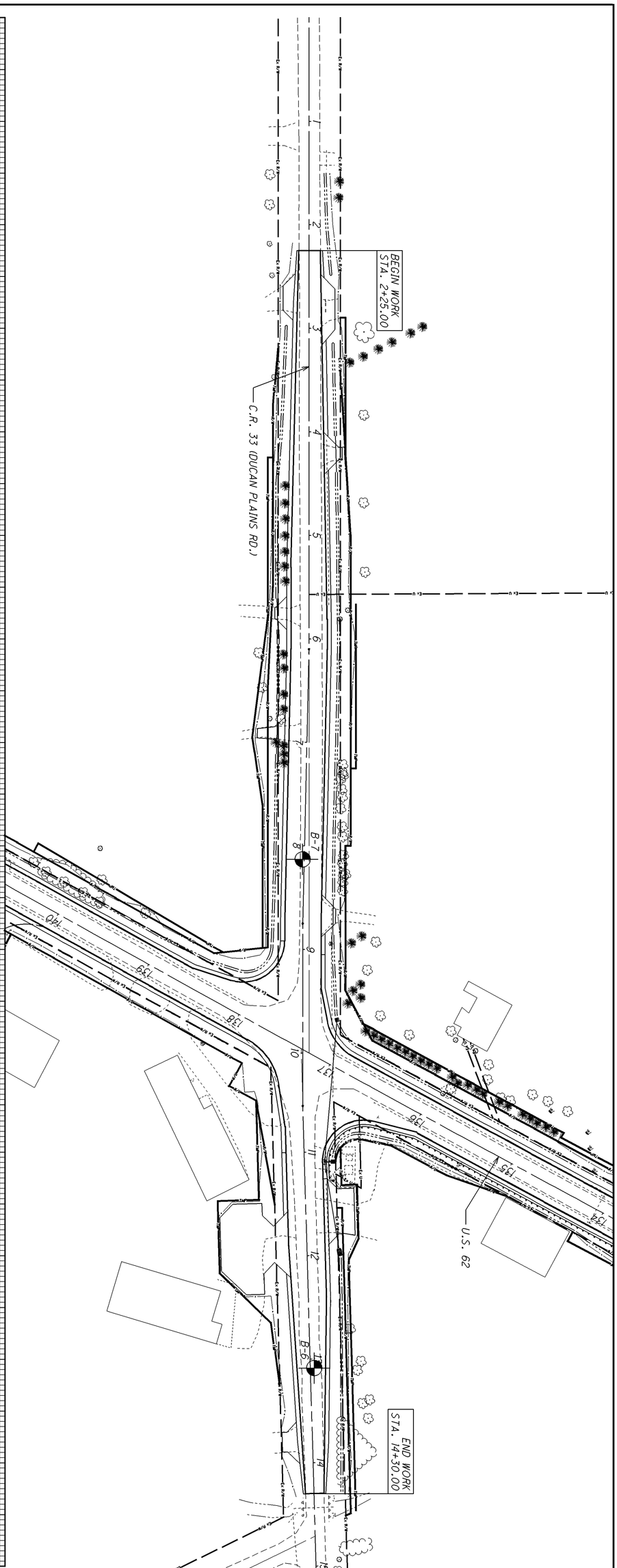
LIC-62-2.41

3 / 4

$DATE$
$FILE$

$TIME$





	4/4	LIC-62-2.41	SOIL PROFILE STA. 1+00 TO 14+00 C.R. 33	DRAWN JBH CHECKED BKL	0 50 25 100 HORIZONTAL SCALE IN FEET