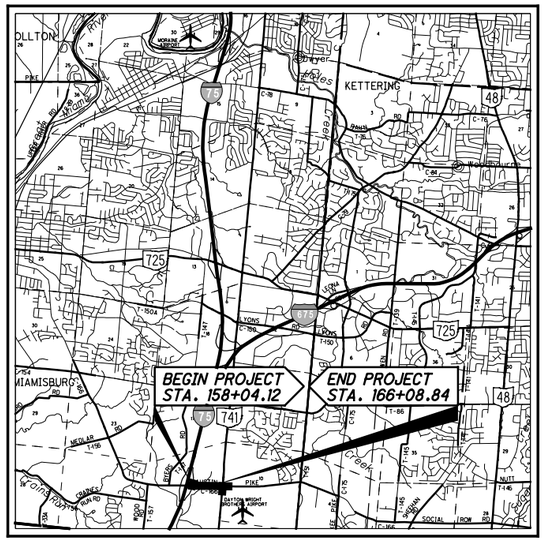
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MOT-75-0.76

MIAMI TOWNSHIP
MONTGOMERY COUNTY



LOCATION MAP

LATITUDE: 39°35'48" LONGITUDE: 84°14'11"

SCALE IN MILES
0 1 2 3 4

N

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

DESIGN DESIGNATION	I-75	SR 741	AUSTIN BLVD
CURRENT ADT (2018)	115,900	31,570	36,740
DESIGN YEAR ADT (2038)	146,460	54,250	46,200
DESIGN HOURLY VOLUME (2038)	7,620	2,690	2,940
DIRECTIONAL DISTRIBUTION	0.53	0.56	0.52
TRUCKS (24 HOUR B&C)	0.17	0.01	0.02
DESIGN SPEED	70 MPH	55 MPH	45 MPH
LEGAL SPEED	65 MPH	50 MPH	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE	URBAN PRINCIPAL ARTERIAL	URBAN MINOR ARTERIAL
NHS PROJECT	YES	YES	YES

DESIGN EXCEPTIONS

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

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

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

PLAN PREPARED BY:

LJB Inc. • 2500 Newmark Drive
Miamisburg, OH 45342
(937) 259-5000 tel • (937) 259-5100 fax • LJBInc.com

ENGINEERS SEAL:

STATE OF OHIO · LAURENCE A. SACK · E49837 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Laurence A. Sack
DATE: 10/26/2018

ENGINEERS SEAL:

STATE OF OHIO · MATTHEW A. GARDNER · E-72393 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Matt Gardner
DATE: 10/26/2018

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700' BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS, AND REVISE TRAFFIC CONTROL TO ACCOMMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.

PROJECT EARTH DISTURBED AREA: 1.32 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

LIMITED ACCESS

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

2016 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE **BIKEPATH** AS DESCRIBED ON SHEET 10 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Randy Chevalley, P.E. P.S. /RPH
DATE 11-28-18 / DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	DM-4.4	1/15/16	MT-105.10	7/19/13	TC-71.10	1/19/18			800-2016	1/18/19	
BP-2.1	7/17/15			MT-110.10	7/19/13	TC-73.20	7/21/17			804	10/19/18	
BP-2.2	7/18/08	HL-10.11	7/20/18			TC-81.21	7/20/18			816	7/20/18	
BP-2.5	7/19/13	HL-10.12	1/20/17	TC-16.21	7/20/18	TC-83.20	7/21/17			821	4/20/12	
BP-3.1	7/18/14	HL-20.11	4/21/17	TC-21.20	7/20/18	TC-85.10	7/21/17			832	10/19/18	
BP-5.1	7/20/18	HL-30.11	7/20/18	TC-22.10	10/18/13	TC-85.20	7/20/18			904	10/19/18	
BP-7.1	7/20/18	HL-30.22	1/17/14	TC-22.20	1/17/14					907	1/20/12	
		HL-60.11	7/21/17	TC-41.20	10/18/13	ITS-14.11	7/17/15			916	1/19/18	
CB-2.1	7/20/18			TC-41.40	10/18/13					921	4/20/12	
CB-2.2	7/20/18	MT-95.30	7/21/17	TC-42.20	10/18/13							
		MT-95.31	7/21/17	TC-51.11	1/15/16							
MH-1.2	1/15/16	MT-95.32	7/21/17	TC-51.12	1/15/16							
		MT-95.41	7/21/17	TC-52.10	10/18/13							
DM-1.1	7/21/17	MT-97.12	1/20/17	TC-52.20	7/20/18							
DM-1.2	1/18/13	MT-101.70	7/20/18	TC-65.10	1/17/14							
DM-4.1	7/20/18	MT-102.10	1/20/17	TC-65.11	7/21/17							

FEDERAL PROJECT NO.	PID NO.	CONSTRUCTION PROJECT NO.
E170(932)	104979	

RAILROAD INVOLVEMENT
NONE

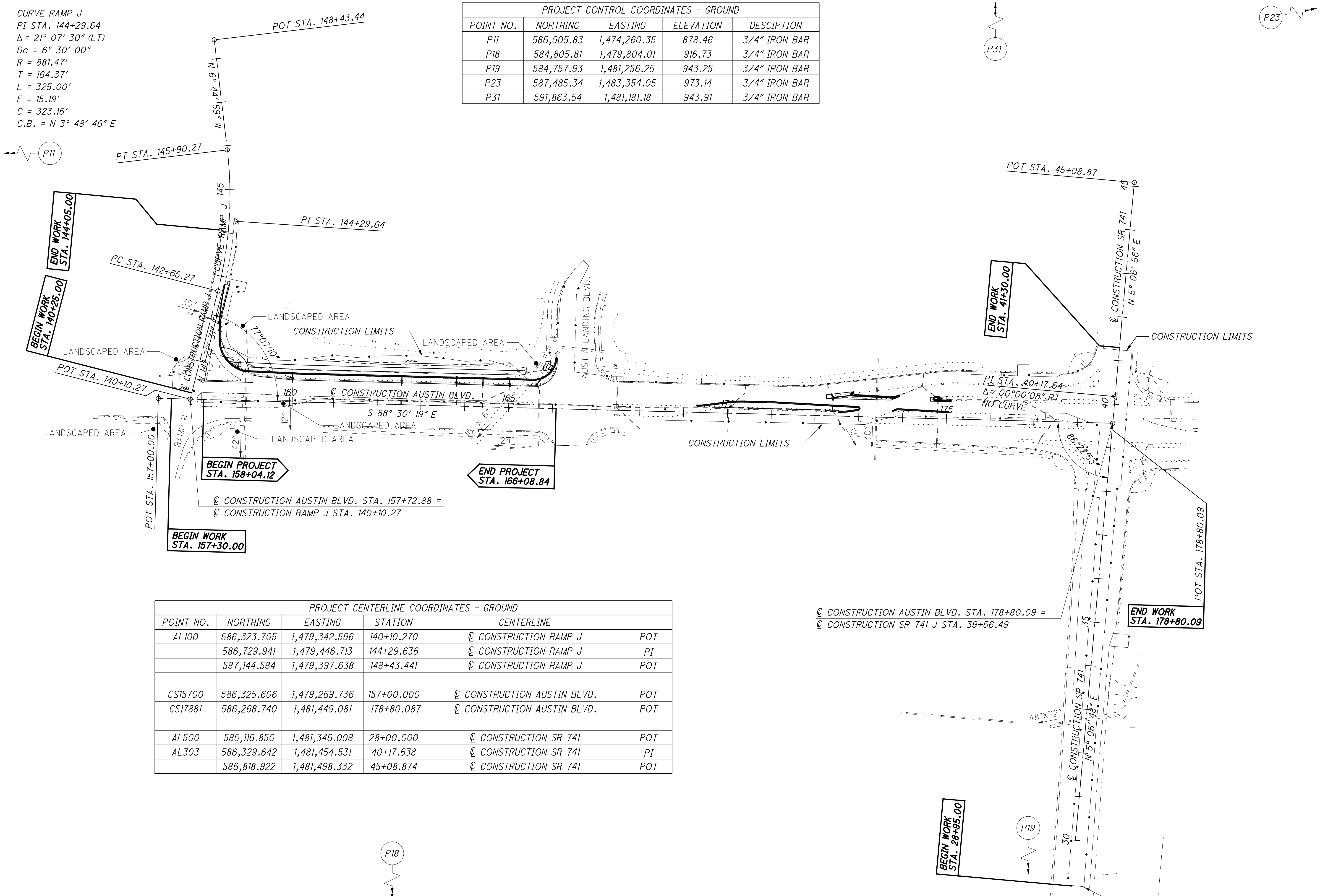
MOT-75-0.76

1
106

Q:\ODOT_D7\011101A.00 - MOT-75-076 PID104979\104979\roadway\sheets\104979GT001.dgn 11/9/2018 11:34:16 AM jdelaney

CURVE RAMP J
PI STA. 144+29.64
Δ = 21° 07′ 30″ (LT)
Dc = 6° 30′ 00″
R = 881.47′
T = 164.37′
L = 325.00′
E = 15.19′
C = 323.16′
C.B. = N 3° 48′ 46″ E

PROJECT CONTROL COORDINATES - GROUND				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCIPTION
P11	586,905.83	1,474,260.35	878.46	3/4″ IRON BAR
P18	584,805.81	1,479,804.01	916.73	3/4″ IRON BAR
P19	584,757.93	1,481,256.25	943.25	3/4″ IRON BAR
P23	587,485.34	1,483,354.05	973.14	3/4″ IRON BAR
P31	591,863.54	1,481,181.18	943.91	3/4″ IRON BAR



PROJECT CENTERLINE COORDINATES - GROUND					
POINT NO.	NORTHING	EASTING	STATION	CENTERLINE	
AL100	586,323.705	1,479,342.596	140+10.270	℄ CONSTRUCTION RAMP J	POT
	586,729.941	1,479,446.713	144+29.636	℄ CONSTRUCTION RAMP J	PI
	587,144.584	1,479,397.638	148+43.441	℄ CONSTRUCTION RAMP J	POT
CS15700	586,325.606	1,479,269.736	157+00.000	℄ CONSTRUCTION AUSTIN BLVD.	POT
CS17881	586,268.740	1,481,449.081	178+80.087	℄ CONSTRUCTION AUSTIN BLVD.	POT
AL500	585,116.850	1,481,346.008	28+00.000	℄ CONSTRUCTION SR 741	POT
AL303	586,329.642	1,481,454.531	40+17.638	℄ CONSTRUCTION SR 741	PI
	586,818.922	1,481,498.332	45+08.874	℄ CONSTRUCTION SR 741	POT

0 50 100 200 HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

MOT-75-0.76

LEGEND

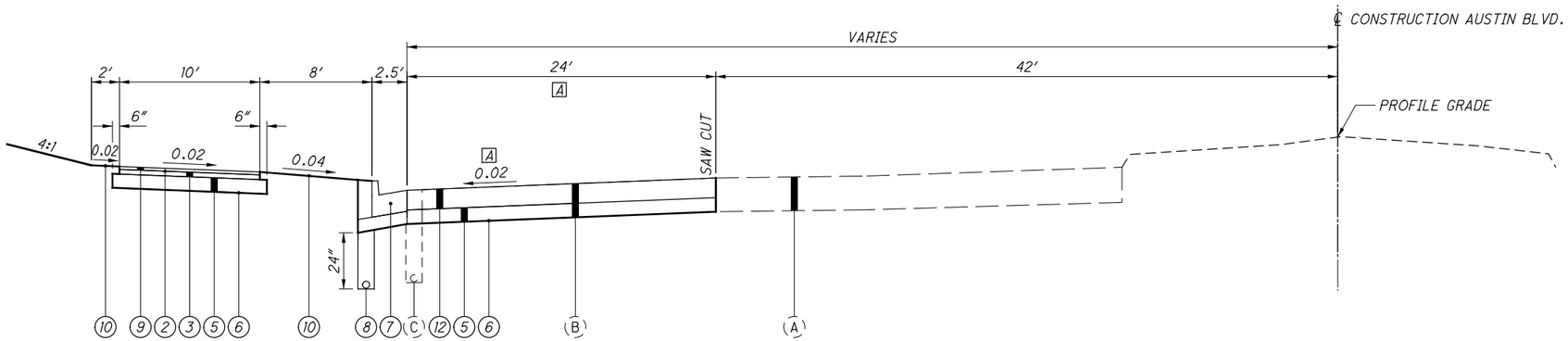
1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
2. ITEM 407 - TACK COAT
3. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
4. ITEM 301 - 8" ASPHALT CONCRETE BASE, PG64-22 (2 - 4" LIFTS)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 204 - SUBGRADE COMPACTION
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
9. ITEM 441 - 1 ¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
10. ITEM 659 - SEEDING AND MULCHING
11. ITEM 609 - CURB, TYPE 6
12. ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
13. ITEM 254 - 1 ½" PAVEMENT PLANING ASPHALT CONCRETE (SEE PLAN SHEETS FOR LOCATIONS)
14. ITEM 451 - REINFORCED CONCRETE PAVEMENT, MISC: 4" ENHANCED CONCRETE PAVEMENT
15. ITEM 204 - 12" EXCAVATION OF SUBGRADE
16. ITEM 203 - 12" GRANULAR MATERIAL, TYPE C
17. ITEM 204 - GEOTEXTILE FABRIC

(A) EXISTING CONCRETE PAVEMENT:
9" NON-REINFORCED CONCRETE PAVEMENT
6" AGGREGATE BASE

(B) EXISTING ASPHALT PAVEMENT:
1 ½" ASPHALT CONCRETE SURFACE
2" ASPHALT CONCRETE INTERMEDIATE COURSE
8" ASPHALT CONCRETE BASE
6" AGGREGATE BASE

(C) EXISTING UNDERDRAIN

[A] VARIES - SEE INTERSECTION DETAILS
STA. 157+97.76 TO STA. 159+05.00



AUSTIN BLVD. CONCRETE WIDENING SECTION
STA. 157+97.76, LT. TO STA. 159+05.00, LT.

[B] 66.00'
STA. 159+05.00 TO STA. 159+25.00

VARIES 66.00' TO 64.00'
STA. 159+25.00 TO STA. 160+15.00

64.00'
STA. 160+15.00 TO STA. 166+08.84

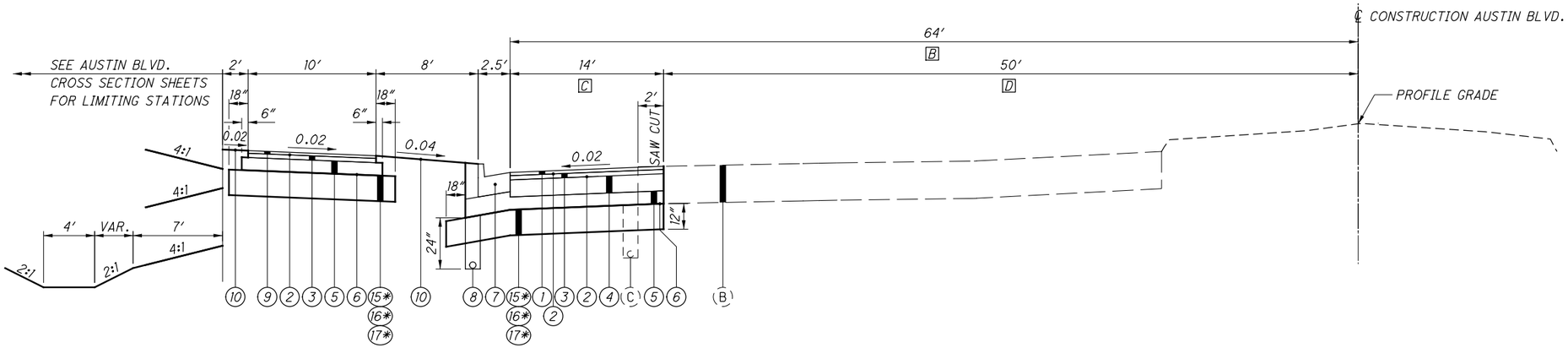
[C] 24.00'
STA. 159+05.00 TO STA. 159+15.00

VARIES 7.12' TO 14.00'
STA. 159+15.00 TO STA. 160+21.84

14.00'
STA. 160+21.84 TO STA. 166+08.84

[D] 42.00'
STA. 159+05.00 TO STA. 159+15.00

VARIES 58.88' TO 50.00'
STA. 159+15.00 TO STA. 166+08.84



AUSTIN BLVD. ASPHALT WIDENING SECTION
STA. 159+05.00, LT. TO STA. 166+08.84, LT.
* STA. 161+00.00 TO STA. 164+00.00

TYPICAL SECTIONS

MOT-75-0.76

3
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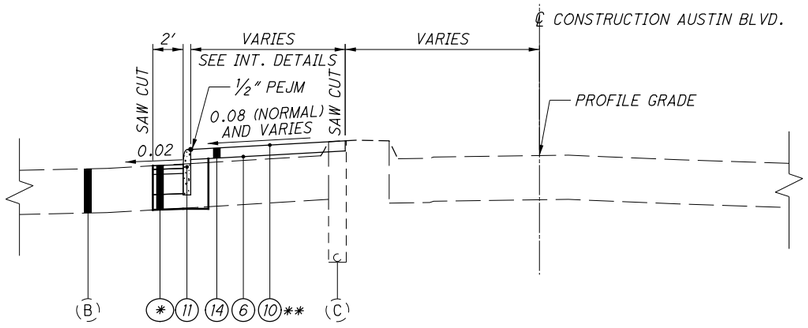
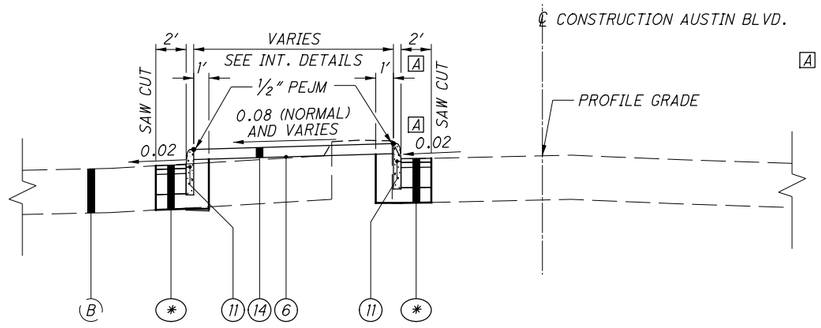


AUSTIN BLVD. MEDIAN SECTION

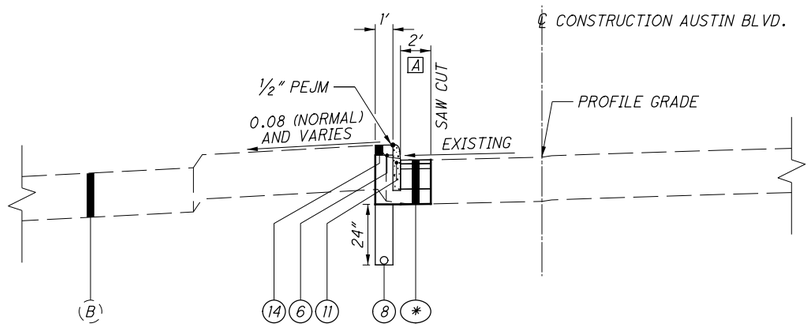
STA. 169+29.98, LT. TO STA. 172+54.08, LT.
STA. 173+77.41, LT. TO STA. 175+05.00. LT.



A VARIES - SEE INTERSECTION DETAILS

AUSTIN BLVD. MEDIAN SECTION

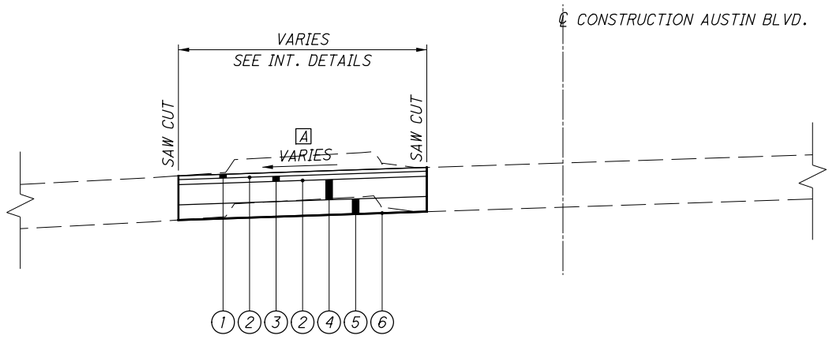
STA. 172+54.08, LT. TO STA. 173+00.21, LT.
STA. 172+82.83, LT. TO STA. 172+87.37, LT.
STA. 174+70.70, LT. TO STA. 174+82.88, LT.



A VARIES - SEE INTERSECTION DETAILS

AUSTIN BLVD. MEDIAN SECTION

STA. 172+87.37, LT. TO STA. 173+91.35, LT.
STA. 174+82.88, LT. TO STA. 175+09.62, LT.



A VARIES - SEE INTERSECTION DETAILS

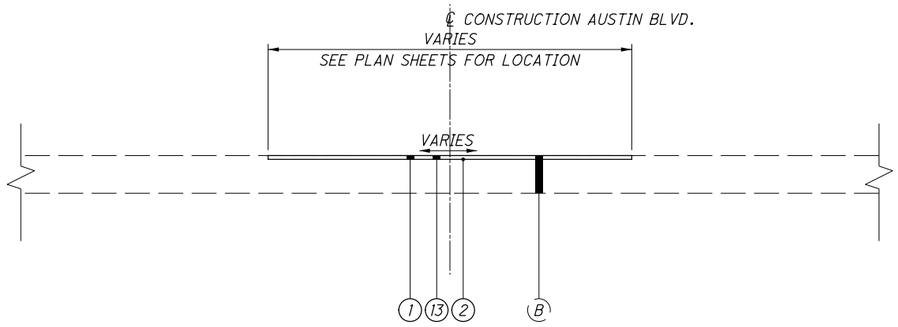
AUSTIN BLVD. FULL DEPTH ASPHALT SECTION

STA. 172+25.00, LT. TO STA. 172+82.83, LT.
STA. 173+00.21, LT. TO STA. 173+02.21, LT.
STA. 174+63.00, LT. TO STA. 174+70.76, LT.

* SEE AUSTIN BLVD. PAVEMENT COMPOSITION
** STA. 169+29.98, LT. TO STA. 169+70.86, LT. AND STA. 173+77.41, LT. TO STA. 175+05.00, LT.

TYPICAL SECTIONS

MOT-75-0.76



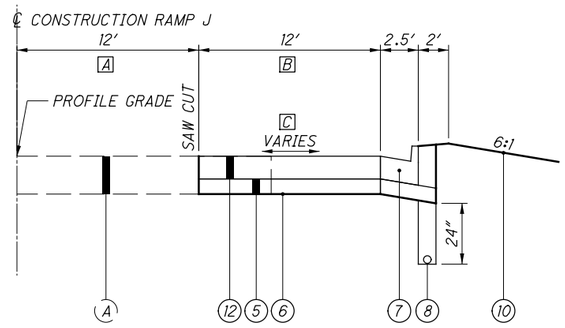
AUSTIN BLVD. OVERLAY SECTION

[A] VARIES 21.09′ TO 17.96′
STA. 140+53.35 TO STA. 141+00.00

12.00′
STA. 141+00.00 TO STA. 141+92.76

[B] VARIES - SEE INTERSECTION DETAILS
STA. 140+53.35 TO STA. 141+92.76

[C] VARIES - SEE INTERSECTION DETAILS
STA. 140+53.35 TO STA. 141+92.76



RAMP J WIDENING SECTION
STA. 140+53.35, RT. TO STA. 141+92.76, RT.

[D] 12.00′
STA. 141+92.76 TO STA. 142+12.43

10.00′
STA. 141+92.76 TO STA. 142+83.68

[E] VARIES 10.13′ TO 6.46′
STA. 141+92.76 TO STA. 142+12.43

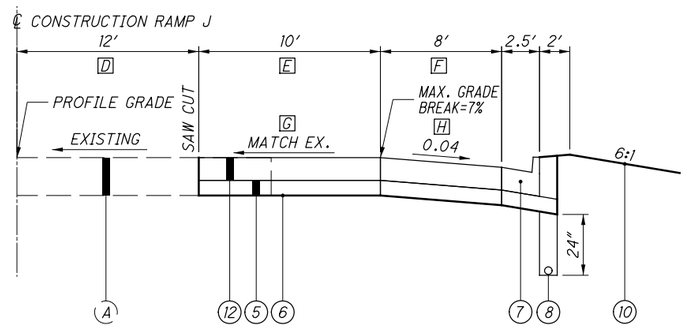
VARIES 8.46′ TO 2.00′
STA. 142+12.43 TO STA. 142+83.68

[F] VARIES 0.0′ TO 1.55′
STA. 141+92.76 TO STA. 142+12.43

VARIES 1.55′ TO 8.00′
STA. 142+12.43 TO STA. 142+83.68

[G] VARIES - SEE INTERSECTION DETAILS
STA. 140+53.35 TO STA. 141+92.76

[H] VARIES - SEE INTERSECTION DETAILS
STA. 140+53.35 TO STA. 141+92.76



RAMP J WIDENING SECTION
STA. 141+92.76, RT. TO STA. 142+83.68, RT.

TYPICAL SECTIONS

MOT-75-0.76

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

ELECTRIC:

DAYTON POWER & LIGHT CO.
1900 DRYDEN RD.
DAYTON, OH 45439

BILL WARD
WILLIAM.WARD@AES.COM
PHONE: 937.554.9063

TELECOMMUNICATIONS:

AT&T OHIO (FORMERLY SBC)
3233 WOODMAN DR.
DAYTON, OH 45420

HOWARD LAUDERMILK
HL1596@ATT.COM
PHONE: 937.296.3588

CINCINNATI BELL (AERIAL)
221 EAST FOURTH ST.
BUILDING 121-900
CINCINNATI, OH 45201

MIKE WILLIAMS, ENG.
MIKE.WILIAMS@CINBELL.COM
PHONE: 513.565.6024

CINCINNATI BELL (UNDERGROUND)
221 EAST FOURTH ST.
BUILDING 121-900
CINCINNATI, OH 45201

MARK CONNER
MARK.CONNER@CINBELL.COM
PHONE: 513.565.7043

MCI WORLD COM/VERIZON
120 RAVINE ST.
AKRON, OH 44303

ALLAN GUEST
ALLEN.GUEST@VERIZON.COM
PHONE: 330.253.8267

CHARTER/SPECTRUM
3691 TURNER RD.
DAYTON, OH 44303

JACOB HUNDESHALL
JACOB.HUNDESHALL@CHARTER.COM
PHONE: 937.396.8372

CENTURYLINK
9490 MERIDIAN WAY
WEST CHAESTER, OH 45069

TERRY SPAW
TERRY.SPAW@CENTURYLINK.COM
PHONE: 513.644.8933

WINDSTREAM
2165 STATE ROUTE 133 SOUTH
BLANCHESTER, OH 45107

LEON TAYLOR
LEON.TAYLOR@WINDSTREAM.COM
PHONE: 937.725.5358

STORM SEWER AND TRAFFIC SIGNAL:

MONTGOMERY COUNTY ENGINEERS OFFICE
451 WEST THIRD STREET
P.O. BOX 972
DAYTON, OHIO 45422-1260

GARY SHOUP
SHOUPG@MCOHIO.ORG
PHONE: 937.2256351

GAS:

VECTREN ENERGY DELIVERY
6500 CLYO ROAD
CENTERVILLE, OH 45459

GREGORY FISHMAN
GFISHMAN@VECTREN.COM
PHONE: 937.312.2521

DUKE ENERGY GAS
139 EAST 4TH ST., ROOM 460A
CINCINNATI, OH 45202

RICHARD HACKER
RICHARD.HACKER@DUKE-ENERGY.COM
PHONE: 513.287.1232

B.P. PIPELINES, INC.
30 SOUTH WACKER DRIVE
SUITE 900
CHICAGO, IL 60606

KEITH BOYLE
KEITH.BOYLE@BP.COM
PHONE: 312.809.4708

KIM MILLER
513.646.6187

SANITARY AND WATER:

MONTGOMERY CO. ENVIRONMENTAL SERVICES
1850 SPAULDING RD.
DAYTON, OH 45432-3732

EDWARD SCHLAACK
SCHLAACKE@MCOHIO.ORG
PHONE: 937.781.2632

WATER:

CITY OF MIAMISBURG
10 N. FIRST ST.
MIAMISBURG, OH 45342

ROBERT STANLEY, CE
ENGINEERING@CITYOFMIAMISBURG.ORG
PHONE: 937.847.6456

ODOT TRAFFIC SIGNAL:

ODOT DISTRICT 7 TRAFFIC
1001 SAINT MARYS AVENUE
SIDNEY, OHIO 45365

JUSTIN YOH
JUSTIN.YOH@DOT.OHIO.GOV
PHONE: 937.497.6897

IRRIGATION AND LIGHTING:

MIAMI TOWNSHIP PUBLIC WORKS
10891 WOOD ROAD
MIAMISBURG, OHIO 45342

DANIEL MAYBERRY
DMAYBERRY@MIAMITOWNSHIP.COM
PHONE: 937.866.4661

AVIATION:

CITY OF DAYTON DEPT. OF AVIATION
3600 TERMINAL DRIVE, SUITE 300
VANDALIA, OHIO 45377

DAN FRANCE
DFRANCE@FLYDAYTON.COM
PHONE: 937.454.8231

EXISTING PLANS
EXISTING PLANS ENTITLED MOT-75-0.75 (WAR) MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY.

SURVEYING PARAMETERS
PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION. USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL
POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL	
POSITIONING METHOD:	ODOT VRS
MONUMENT TYPE:	IRON PIN WITH CAP
VERTICAL POSITIONING	
ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID03
HORIZONTAL POSITIONING	
REFERENCE FRAME:	NAD83(1995)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC TWO PARALLEL
COORDINATE SYSTEM:	OHIO STATE PLANE , SOUTH ZONE
COMBINED SCALE FACTOR:	0.9999033133
PROJECT ADJUSTMENT FACTOR:	1.000096696
ORIGIN OF COORDINATE SYSTEM:	0, 0, 0

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

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

PROTECTION OF RIGHT-OF-WAY LANDSCAPING
PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

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

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 7:00 PM AND 7:00 AM. 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.

CONTRACTION AND/OR EXPANSION JOINTS
ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING
WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS
THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 966 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. 2018-AGL-16774-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/OPERATIONS/AVIATION/PAGES/FAAANDSTATENOTIFICATIONREQUIREMENTS.ASPX

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

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2358

UPON COMPLETION OF THE INSTALLATION OF MAST ARM ALONG SR 741 STA. 34+63, 62.2 RT. THE CONTRACTOR IS TO NOTIFY THE PROJECT ENGINEER, TO EMAIL JONATHAN.KOESTER@DOT.OHIO.GOV THAT THE NEW MAST ARM HAS BEEN INSTALLED.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. AS DIRECTED BY THE ENGINEER, EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

   USE ITEM 204, GRANULAR MATERIAL, TYPE B, WITH NO GEOTEXTILE OR GEOGRID, IN THE AREA OF UNDERDRAINS. TYPE B SHALL BE UTILIZED FOR THE OUTSIDE 4' WIDTH OF THE GRANULAR MATERIAL.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY:

ITEM 204 - GRANULAR MATERIAL, TYPE B	45 CY

CALCULATED JMD CHECKED MAG

GENERAL NOTES

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ITEM 451 - REINFORCED CONCRETE PAVEMENT, MISC.: 4" ENHANCED CONCRETE PAVEMENT
IN ADDITION TO THE REQUIREMENTS OF THE DEPARTMENT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MEDIANS SHALL BE AS FOLLOWS:

CONCRETE MEDIAN FINISH: BOMANITE CORPORATION - MEDIUM ASHLAR SLATE PATTERN WITH SIZES TO RANGE FROM 8" X 9" TO 18" X 20" AND 8" X 9" AND 21" X 32", INCRETE SYSTEMS - RANDOM SIDEWALK SLATE PATTERN. L. M. SCOFIELD COMPANY - FRACTURED RANDOM INTERLOCKING PATTERNS 700A, 700B, 700C, OR EQUAL AS APPROVED BY THE ENGINEER. COLOR MUST MATCH FEDERAL STANDARD 595B: #10115.

BOMANITE CORPORATION
7862 WINDING WAY, #2649
FAIR OAKS, CA 95628
PHONE: (303) 369-1115

INCRETE SYSTEMS
1611 GUNN HIGHWAY
ODESSA, FL 33556
PHONE: (813) 886-8811

L. M. SCHOFIELD COMPANY
1652 E. MAIN ST., SUITE 200
ST. CHARLES, IL 60174
PHONE: (630) 377-5959

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS
THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22	6 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 8 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

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

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

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

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

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

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

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

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

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

UNRECORDED STORMWATER 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 NONPERFORATED, 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:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	50 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	50 FT.

EXISTING UNDERDRAINS
PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE 1	3 SQ. YD.
611, 6" CONDUIT, TYPE F	50 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	2 EACH
605, 6" UNCLASSIFIED PIPE UNDERDRAINS	50 FT.

MULTI-USE TRAIL PROTECTION
THE CONTRACTOR SHALL NOTIFY THE AUSTIN JOINT ECONOMIC DEVELOPMENT DISTRICT (JEDD) AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION OF THE TRAIL DETOUR.

THE CONTRACTOR SHALL PROVIDE THE AUSTIN JEDD AN OPPORTUNITY TO INSPECT THE AFFECTED SEGMENT OF THE MULTI-USE TRAIL PRIOR TO COMPLETTION OF THE PROJECT. ANY DAMAGES OR DEFICIENCIES SHALL BE ADDRESSED BY THE CONTRACTOR TO THE SATISFICATION OF THE AUSTIN JEDD.

CONTACTS:
STEVE STANLEY: SSTANLEY@MCTID.ORG
CRYSTAL CORBIN: CCORBIN@MCTID.ORG

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	707 CU. YD.
659, SEEDING AND MULCHING	6366 SQ. YD.
659, REPAIR SEEDING AND MULCHING	319 SQ. YD
659, INTER-SEEDING	319 SQ. YD.
659, COMMERCIAL FERTILIZER	0.89 TON
659, LIME	1.32 ACRES
659, WATER	37 M. GAL.

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

STA. 165+00 - 16' X 6' CULVERT PROTECTION
BETWEEN THE PROPOSED SAW CUT LINE AND TWO FEET BEHIND THE PROPOSED BACK OF CURB, EXPOSE THE EXISTING 16' X 6' CULVERT. REPAIR ANY DAMAGED WATERPROOFING.

TO AVOID ANY DAMAGE TO THE CULVERT WATERPROOFING, AGGREGATE SHALL NOT BE PLACED DIRECTLY ON THE THE CULVERT'S WATERPROOFING. A MINIMUM OF 6" OF ITEM 301, ASPHALT CONCRETE BASE, PG 64-22 SHALL BE PLACED DIRECTLY ABOVE THE EXPOSED CULVERT. EXTEND THE ITEM 301 BASE UP TO THE BOTTOM OF THE ITEM 442 INTERMEDIATE COURSE.

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

ITEM 301 - ASPHALT CONCRETE BASE, PG 64-22	10 CY
ITEM 512 - TYPE A WATERPROOFING	60 SY

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

VEGETATED BIOFILTER
THIS PLAN UTILIZES A VEGETATED BIOFILTER FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SHOWN IN PLANS.

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CHECKED MAG

GENERAL NOTES

MOT-75-0.76

BP PIPELINE CONSTRUCTION NOTICE

PRIOR TO ANY ACTIVITY NEAR THE PIPELINE RIGHT-OF-WAY, BP'S DAMAGE PREVENTION SPECIALIST, KIM MILLER, MUST BE CONTACTED TO LOCATED AND FLAG THE PIPELINE. KIM OR HIS REPRESENTATIVE MUST BE ON SITE AT ALL TIMES WHEN WORKING IN PROXIMITY TO THE PIPELINE. KIM CAN BE REACHED AT (513) 646-6187.

THE PIPELINE MUST BE EXPOSED PRIOR TO THE COMMENCEMENT OF ANY MECHANICAL EXCAVATION FOR THE INSTALLATION THE OVERHEAD SIGN. THIS ACTIVITY IS ONLY TO OCCUR WITH THE SUPERVISION OF BP'S DAMAGE PREVENTION SPECIALIST.

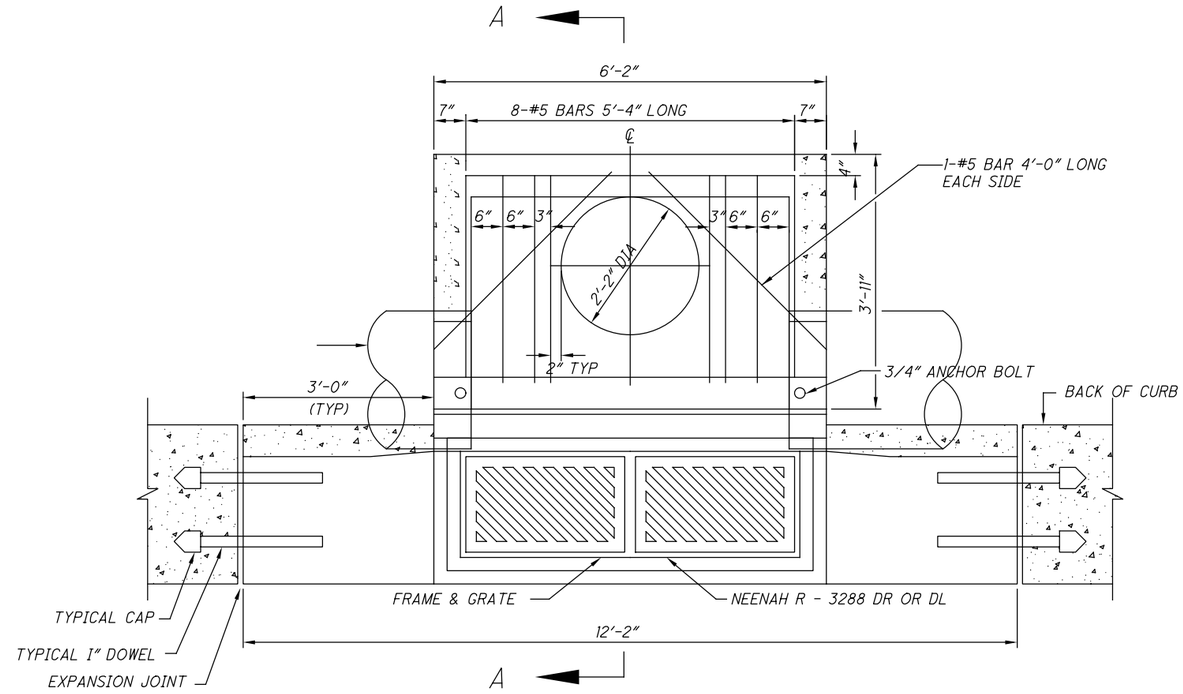
ANY EXCAVATION WITHIN 2 FT. (24") OF THE PIPELINE SHALL BE DONE BY HAND, OR OTHER NON-MECHANICAL MEANS, AS APPROVED BY BP PERSONNEL.

A COPY OF THE BP NO OBJECTION LETTER MUST BE ONSITE AT ALL TIMES AND ALL CONSTRUCTION WORKERS AND EQUIPMENT OPERATORS MUST BE MADE AWARE OF THE REQUIREMENTS. FAILURE TO HAVE A COPY OF THE APPROVAL LETTER ONSITE MAY RESULT IN A STOP WORK ORDER UNTIL THE CONSTRUCTION TEAM IS MADE AWARE OF THE CONDITIONS AND REQUIREMENTS REQUIREDIN THE APPROVAL LETTER.

IF THE BP DAMAGE PREVENTION SPECIALIST, IN HIS/HER SOLE DISCRETION, DETERMINES THAT THE CONSTRUCTION ACTIVITIES COULD RESULT IN DAMAGE TO THE PIPELINE, THE DAMAGE PREVENTION SPECIALIST WILL NOTIFY ODOT, THEIR OPERATOR OR CONTRACTOR. ODOT HEREIN ACKOWNLEDGES THAT THE BP DAMAGE PREVENTION SPECIALIST SHALL HAVE FULL AUTHORITY TO STOP ANY EXCAVATION OR CONSTRUCTION RELATED ACTIVITIES IN CLOSE PROXIMITY TO THE BP PIPELINE IF IN THE DAMAGE PREVENTION SPECIALIST'S OPINION, SUCH ACTIVITES COULD RESULT IN DAMAGE TO THE PIPELINE.

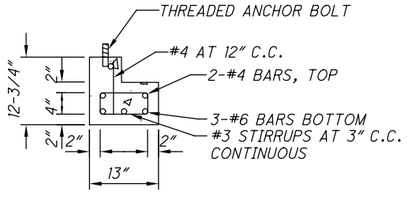
SHOULD THE SCOPE OF THE PROJECT CHANGE AND BECOME NECESSARY FOR EQUIPMENT TO BE OPERATED IN CLOSE PROXIMITY TO BP'S RIGHT-OF-WAY, A LIST OF THE PROPOSED EQUIPMENT, AND APPLICABLE REVISED DRAWINGS, MUST BE SUBMITTED TO BP FOR REVIEW AND ANALYSIS. THE CHANGE IN SCOPE SHALL NOT PROCEED UNTIL BP PROVIDES WRITTEN APPROVAL FOR THE CONTEMPLATED CHANGES IN SCOPE AND/OR EQUIPMENT.

FURTHERMORE, UNLESS OTHERWISE STIPULATED BY BP, NO EQUIPMENT WILL BE ALLOWED ON OR NEAR BP'S PIPELINE WITHOUT PRIOR WRITTEN APPROVAL FROM BP. PER RELEVANT STATE LAW, 811, THE NATIONAL ONE-CALL NUMBER, MUST BE CONTACTED, PRIOR TO COMMENCEMENT OF ANY APPROVED EXCAVATION RELATED ACTIVIITES.

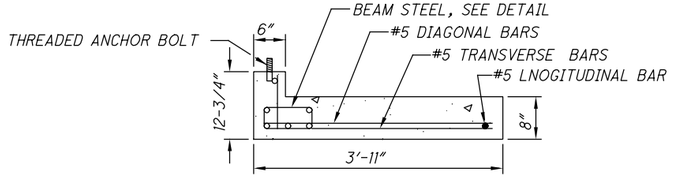


PAYMENT FOR CB-3, AS PER PLAN CATCH BASIN SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 604 CATCH BASIN, NO. 3, AS PER PLAN

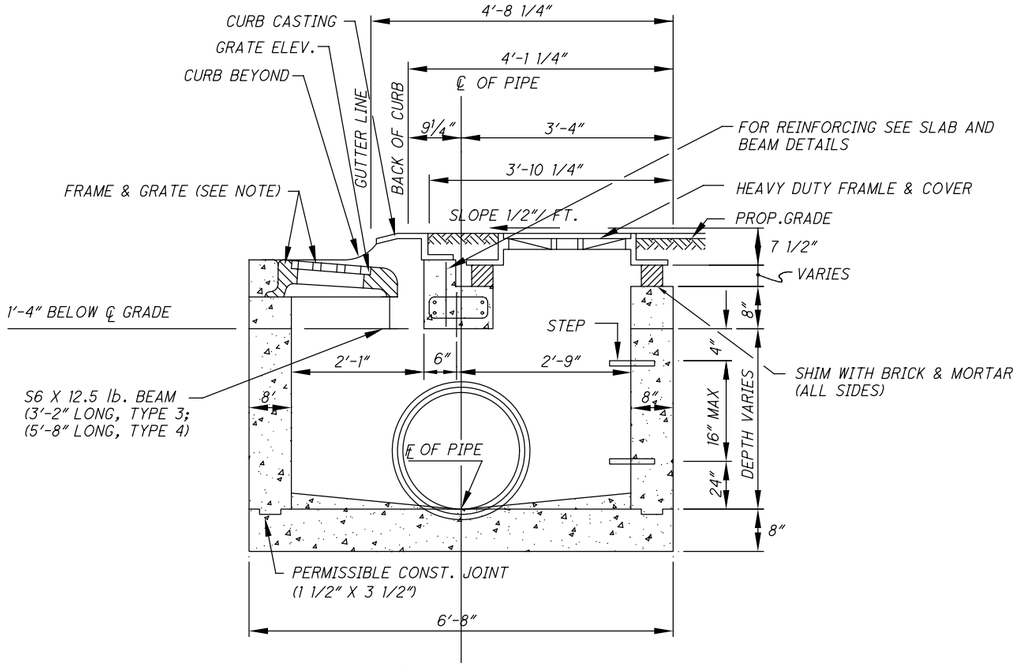
CATCH BASIN, NO. 3, APP - PLAN VIEW



BEAM DETAIL



SLAB DETAIL



SECTION A-A

CB-3, APP

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GENERAL NOTES

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ITEM 614, MAINTAINING TRAFFIC
A MINIMUM OF 2 LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ALONG ALL ROADS BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

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

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

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

OVERNIGHT TRENCH CLOSING
THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

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

ITEM 616, WATER	10 M. GAL

EARTHWORK FOR MAINTAINING TRAFFIC
THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	50 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	50 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

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

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

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

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 AND MAINTAIN 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.

PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN
PAVEMENT FOR MAINTAINING TRAFFIC SHALL CONSIST OF 2" OF ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AND 10" OF ITEM 301 OR ITEM 302, ASPHALT CONCRETE.

PAYMENT FOR THE FOLLOWING QUANTITY OF WORK ZONE PAVEMENT IS INCLUDED IN THE GENERAL SUMMARY UNDER ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN - 376 SQ. YD.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN
WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.

RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15TH THROUGH APRIL 1ST .

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE - 585 SQ. YD.

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

NOTIFICATION OF TRAFFIC RESTRICTIONS
THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS >12 HOURS & < 2 WEEKS <= 12 HOURS	21 CALENDAR DAYS PRIOR TO CLOSURE 14 CALENDAR DAYS PRIOR TO CLOSURE 4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE 5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES MULTI-USE TRAIL DETOUR	>1 DAY	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION 14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

DELINEATION OF PORTABLE AND PERMANENT BARRIER
BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

LANE CLOSURE RESTRICTIONS
THE LANE CLOSURE TIMES ON AUSTIN BLVD AND SR-741 SHALL BE AS FOLLOWS: ONE LANE MAY BE CLOSED FROM 7:00 PM TO 6:00 AM EACH NIGHT, BEGINNING SUNDAY AT 7:00 P.M. THROUGH FRIDAY AT 6:00 A.M.

NO LANE CLOSURES ON IR-75 OR IR-75 RAMPS WILL BE PERMITTED.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

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

CALCULATED DJB CHECKED GKB

MAINTENANCE OF TRAFFIC GENERAL NOTES

MOT-75-0.76

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

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

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

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

- 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 FOR LONG TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 80 HOURS

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

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

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

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONTINUED)

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 1 SIGN MONTH

ASSUMING 1 SIGN FOR 1 MONTH

SEQUENCE OF CONSTRUCTION

BEFORE THE COMMENCEMENT OF EACH CONSTRUCTION PHASE, THE CONTRACTOR SHALL REVISE THE PAVEMENT MARKINGS, REMOVE CONFLICTING PAVEMENT MARKINGS AND COVER CONFLICTING SIGNS.

SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION PER THE TEMPORARY SIGNAL PLAN. EXISTING VEHICULAR VIDEO DETECTION MAY REQUIRE RECONFIGURATION FOR EACH PHASE.

PRE-CONSTRUCTION PHASE:

DETOUR THE BIKEPATH ALONG THE NORTH SIDE OF AUSTIN LANDING PER THE DETOUR NOTE. REMOVE EXISTING CURB AND SIDEWALK FROM APPROX. STATION 158+43 LEFT TO APPROX. STATION 161+35 LEFT. CONSTRUCT TEMPORARY PAVEMENT AS SHOWN IN THE PLANS TO MAINTAIN RIGHT TURN MOVEMENT DURING PHASE 1.

AT THE RAMP J SIGNAL, ERECT WOOD POLES AND TEMPORARY SIGNAL HEADS, CONSTRUCT NEW SUPPORT FOUNDATION, AND BORE NEW CONDUIT RUNS. SEE THE TEMPORARY TRAFFIC SIGNAL PLAN SHEET. RELOCATE EXISTING SIGNAL SUPPORT TO NEW FOUNDATION.

PHASE 1:

PLACE WORK ZONE PAVEMENT MARKING AS SHOWN IN THIS PHASE. SHIFT WESTBOUND AUSTIN PIKE TRAFFIC SOUTHERLY CLOSER TO THE MEDIAN AS SHOWN IN THE PLANS. MAINTAIN THE EXISTING NUMBER OF LANES.

MAINTAIN 1 FT BUFFER FROM EXISTING MEDIAN CURB, 10 FT LANE WIDTHS, 1 FT BUFFER TO PORTABLE BARRIER AND 1 FT BUFFER BETWEEN PORTABLE BARRIER TO WORK ZONE.

BETWEEN STA. 172+00 AND 176+00, SHIFT THE TWO MOST NORTHERN WESTBOUND AUSTIN LANES TO THE NORTH TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM EXISTING CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

BETWEEN STA. 172+00 AND 176+00, SHIFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741 TO THE RIGHT (MAINTAINING SOUTHERN EDGE LINE) TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM EXISTING CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

SHIFT SOUTHBOUND AUSTIN LANDING BLVD TRAFFIC TO THE EAST. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE, AND TWO 11 FT RIGHT TURN LANES.

SHIFT RAMP J TRAFFIC TO THE LEFT MAINTAINING TWO 10' LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

UTILIZE TEMPORARY PAVEMENT CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE TO MAINTAIN WESTBOUND AUSTIN RIGHT TURN MOVEMENT TO RAMP J ENTRANCE RAMP.

UTILIZE TEMPORARY SIGNAL AT RAMP J INTERSECTION CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE.

CONSTRUCT WORK AS SHOWN IN THE AREAS SHOWN IN THE PLANS FROM STATION 158+00 TO STATION 159+15, FROM STATION 162+44 TO STATION 166+10 INCLUDING PROPOSED STORM, AND FROM STATION 172+25 TO STATION 173+93 INCLUDING PROPOSED STORM TO THE TOP OF THE INTERMEDIATE COURSE. CONSTRUCT PROPOSED SIGNAL SUPPORT AND HEADS. CONSTRUCT PROPOSED SIGNS AND COVER WHERE SHOWN IN THE PLANS. CONSTRUCT THE BIKE PATH WITHIN THE LIMTS AS SHOWN IN THE PLANS.

PHASE 1A:

BETWEEN STA. 172+00 AND 176+00, SHIFT TO THE LEFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO

SEQUENCE OF CONSTRUCTION (CONTINUED)

PHASE 1A: (CONTINUED)

TO NORTHBOUND SR-741, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE NEWLY CONSTRUCTED CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

CONSTRUCT THE PAVEMENT AND MEDIAN REVISIONS TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS INCLUDING PROPOSED STORM.

CONTINUE TO UTILIZE TEMPORARY SIGNAL AT RAMP J INTERSECTION CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE.

PHASE 2:

REVISE WESTBOUND AUSTIN PIKE TRAFFIC PATTERN AS SHOWN IN THE PLANS. MAINTAIN THE EXISTING NUMBER OF LANES. MAINTAIN 1 FT BUFFER FROM EXISTING AND NEWLY CONSTRUCTED MEDIAN CURB, 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

BETWEEN STA. 169+50 AND 175+00, SHIFT TO THE RIGHT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741, TO THE RIGHT, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, AND 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE. MAINTAIN MINIMUM OF TWO 10 FT LANES.

MAINTAIN RAMP J LANE CONFIGURATION AS IN PHASE 1. CONSTRUCT THE PROPOSED RAMP J WORK AND AUSTIN PIKE WIDENING UP TO STATION 142+44 INCLUDING PROPOSED STORM. CONSTRUCT THE PROPOSED AUSTIN BLVD WORK BETWEEN STATION 168+50 AND STATION 173+00 TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS. CONSTRUCT PROPOSED SIGNS SHOWN IN THE PLANS. COVER SIGNS WHERE NOTED. CONSTRUCT THE REMAINING PROPOSED BIKE PATH AS SHOWN IN THE PLANS.

PHASE 2A:

BETWEEN STA. 172+00 AND 175+00, SHIFT TO THE LEFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE, AND TWO-10 FT LANES.

CONSTRUCT THE PROPOSED PAVEMENT AND MEDIAN REVISIONS TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS BETWEEN STATION 173+75 AND STATION 175+05.

PHASE 3 NOT SHOWN:

TERMINATE THE BIKEPATH DETOUR ALONG THE NORTH SIDE OF AUSTIN LANDING AND OPEN THE BIEKWAY. MILL 1.5" OF THE SURFACE COURSE TO THE LIMITS SHOWN IN THE ROADWAY PLANS. ADD SURFACE COURSE, PLACE WORK ZONE PAVEMENT MARKING AND UNCOVER PROPOSED SIGNING.

PEDESTRIAN AND BIKE DETOUR

ADVANCED SIGNING PER MT-110.10 SHALL BE INSTALLED:

1) ALONG THE SIDEWALK ON THE WEST SIDE OF AUSTIN LANDING BLVD. BETWEEN AUSTIN BLVD. AND INNOVATION WAY

2) ALONG THE BIKEPATH ON THE NORTH SIDE OF AUSTIN BLVD. BETWEEN THE AUSTIN LANDING INTERSECTION S.R. 741 INTERSECTION

3) ALONG THE BIKEPATH ON THE NORTH SIDE OF AUSTIN BLVD. WEST OF THE AUSTIN WEST BLVD. INTERSECTION

CLOSE THE BIKEPATH ALONG THE NORTH SIDE OF AUSTIN BLVD. BETWEEN AUSTIN LANDING AND I-75 NORTHBOUND RAMPS.

EASTBOUND BIKE TRAFFIC SHALL BE DIRECTED TO CROSS AUSTIN BOULEVARD AT THE EASTERLY CROSSWALK OF THE SIGNALIZED INTERSECTION WITH AUSTIN WEST BLVD. TO THE SIDEWALK ALONG THE SOUTH SIDE OF AUSTIN BOULEVARD. BIKE TRAFFIC SHALL TRAVEL EAST ALONG THE AUSTIN BOULEVARD SOUTH SIDEWALK TO THE INTERSECTION WITH AUSTIN LANDING. THE BIKE TRAFFIC SHALL UTILIZE THE EXISTING CROSSWALKS TO TRAVEL NORTH ACROSS AUSTIN BOULEVARD TO THE EXISTING BIKE PATH.

WESTBOUND BIKE TRAFFIC SHALL USE THE SAME SIDEWALK AND CROSSINGS. THE DETOUR SHALL BE IN PLACE FOR MOT PHASE 1, 1A, 2, AND 2A.

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

CALCULATED DJB CHECKED GKB

MAINTENANCE OF TRAFFIC GENERAL NOTES

MOT-75-0.76

SHEET NO.	STATION TO STATION						614 INCREASED BARRIER DELINEATION FT	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER EACH			614 WORK ZONE LANE LINE, CLASS I MILE	614 WORK ZONE EDGE LINE, CLASS I MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I FT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I FT	614 WORK ZONE DOTTED LINE, CLASS I FT		614 WORK ZONE STOP LINE, CLASS I FT	614 WORK ZONE ARROW, CLASS I EACH		622 PORTABLE BARRIER, 32" FT				
	PHASE 1																								
14	157+10.00	RT	TO	157+80.00	LT												96								
14	157+87.50	LT		161+71.00	LT									0.073											
14	158+00.00	LT		165+55.00	LT									0.143											
14	158+29.00	LT		165+60.55	LT								0.139												
14	161+71.00	LT		165+55.00	LT										384										
14	158+02.00	LT		159+92.00	LT		150	4	2													150			
14	165+60.55	LT		166+45.00	LT												153								
14	162+00.00	LT																		1					
14	163+00.00	LT																		1					
14	164+00.00	LT																		1					
14	165+00.00	LT																		1					
14	158+20.00	LT		160+05.00	LT		200	5	1													200			
14	158+15.40	LT		159+85.00	LT									0.043											
14	158+41.20	LT		165+55.30	LT									0.140											
14	162+16.70	LT		165+46.70	LT		310	7														310			
14	159+85.00	LT		161+71.00	LT									0.035											
14	10+45.00	LT		13+24.00	LT									0.066											
14	10+47.00	LT		12+47.00	LT		230	6	1													230			
14	11+29.00	LT		12+76.00	LT										151										
14	11+29.00	LT		13+66.00	LT										245										
14	11+29.00	LT																	11						
14	11+38.60	LT																		2					
14	12+27.80	LT																		2					
14	140+59.30	LT		144+12.80	LT										354										
14	140+61.50	LT		142+62.40	LT									0.038											
14	140+49.60	RT		141+75.60	RT									0.024											
14	140+53.20	RT		141+53.20	RT		80	3	1													80			
14-15	167+60.80	LT		170+60.00	LT									0.057											
14-15	167+62.00	LT		169+30.00	LT										168										
14-15	167+63.00	LT		173+21.00	LT								0.106	0.106											
14-15	169+30.00	LT		172+53.50	LT												326								
14-15	171+75.00	LT		175+18.00	LT									0.065											
14-15	172+15.00	LT		176+01.00	LT									0.073											
14-15	172+52.00	LT		176+00.00	LT					18					350										
14-15	176+00.00	LT		177+50.00	LT					8						150									
14-15	172+15.00	LT		174+82.60	LT		250	6	1													250			
14-15	172+13.00	LT		174+18.60	LT		210	5														210			
14-15	172+13.00	LT		175+24.00	LT									0.060											
14-15	172+43.00	RT		172+93.00	RT										50										
14-15	172+93.00	RT		173+98.00	LT												112								
14-15	173+98.00	LT		175+14.00	LT										120										
14-15	173+77.00	LT		176+82.00	LT									0.058											
14-15	174+50.00	LT		176+82.00	LT									0.044											
14-15	174+50.00	LT		176+82.00	LT					12					232										
14-15	176+82.00	LT		178+24.00	LT					8						142									
TOTALS CARRIED TO GENERAL SUMMARY							1430	36	6	46			0.25	1.03	2054	292	687		11	8		1430			

CALCULATED GKB
CHECKED MAG

OFFICE OF TRAFFIC SUBSUMMARY

MAINTENANCE

MOT-75-0.76

	SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER EACH			614 WORK ZONE LANE LINE, CLASS I MILE	614 WORK ZONE EDGE LINE, CLASS I MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I FT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I FT	614 WORK ZONE DOTTED LINE, CLASS I FT		614 WORK ZONE STOP LINE, CLASS I FT	614 WORK ZONE ARROW, CLASS I EACH		622 PORTABLE BARRIER, 32" FT		614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I FT		
		PHASE 1A																								
	16	171+06.00	LT		172+13.00	LT								0.020												
	16	171+06.00	LT		172+15.00	LT								0.021												
	16	172+46.00	LT		173+06.00	LT								0.011												
	16	172+46.00	RT		172+91.00	RT									45											
	16	172+91.00	LT		173+82.00	LT											98									
	16	173+57.00	LT		175+75.00	LT								0.043												
	16	173+00.00	RT		173+61.00	LT								0.012												
	16	173+61.00	LT		176+82.00	LT								0.061												
	16	174+08.50	LT		174+50.50	LT								0.008												
	16	174+08.50	LT		177+02.00	LT								0.056												
	16	174+29.00	LT		175+27.00	LT	80	3	1														80			
	16	174+59.00	LT		176+49.00	LT	170	4	1														170			
	16	173+82.70	LT		177+02.00	LT				17					325											
	16	177+02.00	LT		178+18.00	LT				6						116										
		PHASE 2																								
	18	141+24.00	RT		143+73.00	RT								0.047												
	18	140+49.60	RT	TO	141+00.00	RT								0.010												
	18	141+26.50	RT		143+45.80	RT	200	5	1														200			
	18	157+87.50	LT		158+62.20	LT								0.014												
	18	157+98.50	LT		158+62.20	LT								0.016												
	18	158+04.00	LT		166+07.00	LT								0.165												
	18	163+67.00	LT		165+55.00	LT							0.071													
	18	165+56.00	LT		166+18.00	LT											92									
	18	165+54.00	LT		167+39.00	LT											185									
	18-19	167+40.00	LT		173+49.00	LT								0.114												
	18	167+63.00	LT		168+92.00	LT							0.024													
	18-19	167+62.00	LT		173+50.00	LT							0.111													
	18-19	167+61.00	LT		170+60.00	LT										299										
		170+60.00	LT		172+53.50	LT											194									
	19	169+50.00	LT		173+29.00	LT	360	8	1														360			
	19	168+50.00	RT		173+49.00	LT								0.095												
	19	169+87.00	RT		172+91.00	RT									304											
	19	168+89.00	RT		173+16.40	LT	410	9	2														410			
	19	172+33.00	RT		176+95.00	LT								0.089												
	19	172+42.50	LT		173+92.00	LT								0.028												
	19	172+91.00	RT																20							
	19	172+91.00	RT		174+16.50	LT											133									
	19	174+16.00	LT		176+27.00	LT							0.040													
	19	173+92.00	LT		176+27.00	LT								0.074												
	19	173+92.00	LT		176+95.00	LT								0.057												
	19	174+36.00	LT		176+95.00	LT				13					259											
	19	174+45.70	LT		176+27.00	LT								0.035												
	19	174+45.70	LT		176+95.00	LT								0.047												
	18	11+08.00	LT		13+51.50	LT									265											
	18	12+78.00	LT		13+51.50	LT									78											
	18	11+08.00	LT																36							
	18	11+29.00	LT																25							
	18	11+08.00	LT		12+37.00	LT																			198	
TOTALS CARRIED TO GENERAL SUMMARY							1220	29	6	36			0.25	1.02	1276	415	702		81			1220		198		

CALCULATED GKB
CHECKED MAG

SUMMARY OF TRAFFIC MAINTENANCE

MOT-75-0.76

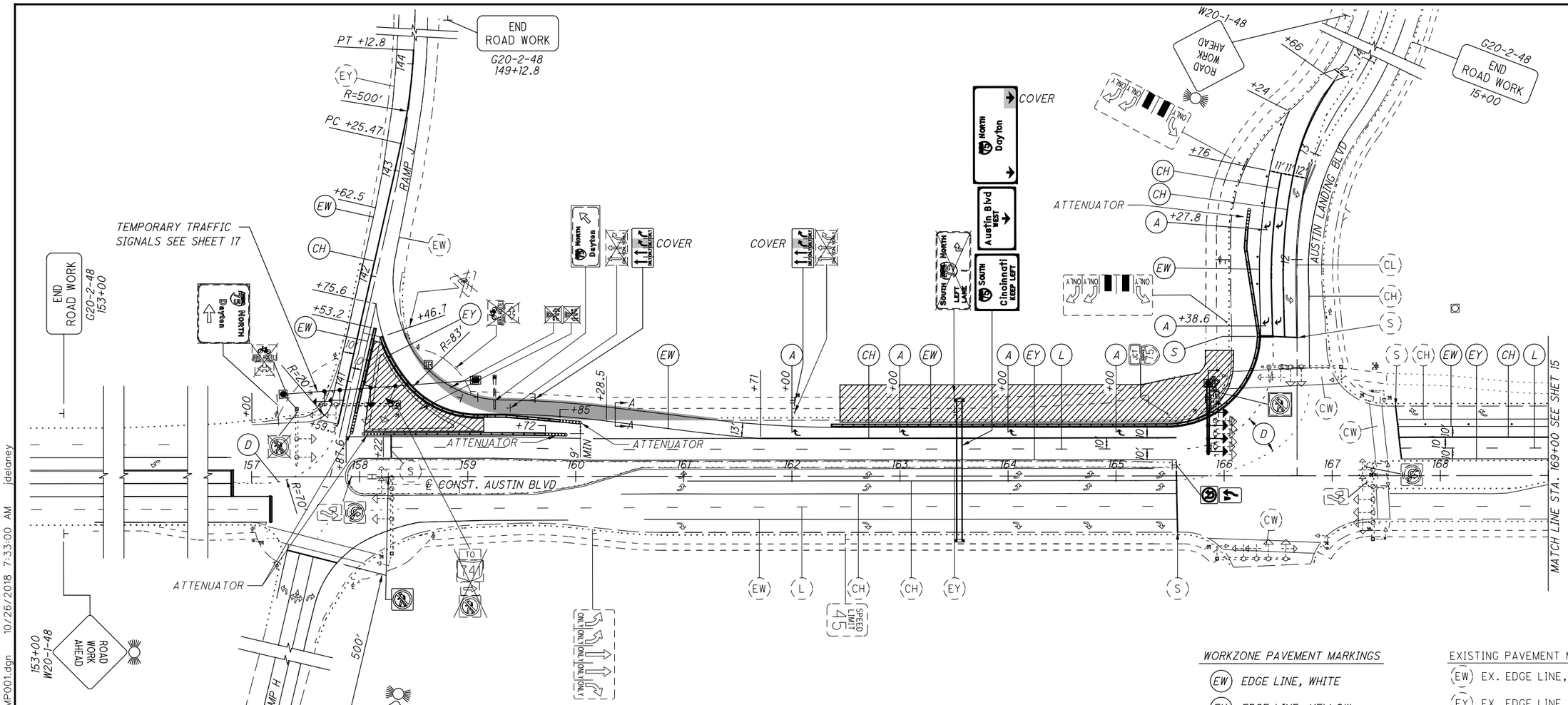
SHEET NO.	STATION TO STATION						614 INCREASED BARRIER DELINEATION FT	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER EACH			614 WORK ZONE LANE LINE, CLASS I MILE	614 WORK ZONE EDGE LINE, CLASS I MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I FT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I FT	614 WORK ZONE DOTTED LINE, CLASS I FT		614 WORK ZONE STOP LINE, CLASS I FT	614 WORK ZONE ARROW, CLASS I EACH		622 PORTABLE BARRIER, 32" FT				
	PHASE 2A																									
20	172+91.00	LT		174+04.00	LT												122									
20	174+04.00	LT		176+95.00	LT								0.057													
20	171+33.80	LT		173+35.70	LT									0.038												
20	172+47.70	LT		172+87.80	LT									0.008												
20	172+47.70	LT		173+80.00	LT									0.025												
20	172+89.00	LT		173+35.70	LT									0.009												
20	173+84.00	LT		176+95.00	LT									0.059												
20	174+30.00	LT		176+95.00	LT					14					265											
20	173+31.00	RT		175+65.00	LT		200	5	2														200			
20	173+00.00	LT		173+84.00	LT									0.016												
20	173+80.00	LT		176+27.00	LT									0.047												
20	174+30.00	LT																	20							
TOTALS CARRIED TO GENERAL SUMMARY							200	5	2	14			0.06	0.20	265		122		20			200				

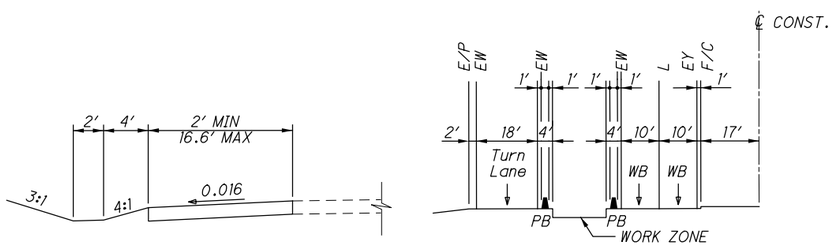
CALCULATED GKB
CHECKED MAG

SUMMARY OF TRAFFIC MAINTENANCE

MOT-75-0.76

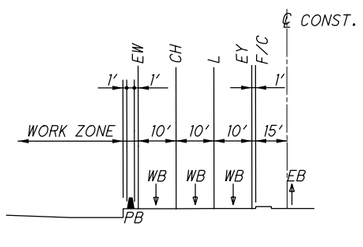
13
106





WORK ZONE PAVEMENT SECTION A-A

SECTION AT STA. 159+00



SECTION AT STA. 163+00

WORKZONE PAVEMENT MARKINGS

- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (CH) CHANNELIZING LINE
- (L) LANE LINE
- (CL) CENTER LINE, DOUBLE
- (S) STOP LINE
- (A) LANE ARROW
- (CW) CROSSWALK LINE
- (D) DOTTED LINE

EXISTING PAVEMENT MARKINGS

- (EW) EX. EDGE LINE, WHITE
- (EY) EX. EDGE LINE, YELLOW
- (CH) EX. CHANNELIZING LINE
- (L) EX. LANE LINE
- (CL) EX. CENTER LINE, DOUBLE
- (S) EX. STOP LINE
- (CW) EX. CROSSWALK LINE
- (T) TRANSVERSE LINE
- EX. LANE ARROW

LEGEND

- EXISTING SIGN RELOCATED
- EXISTING SIGN REMOVED
- WORK ZONE
- WORK ZONE PAVEMENT CONSTRUCTED IN PRE-CONSTRUCTION PHASE
- PORTABLE BARRIER
- · · DRUMS AT 40' SPACING
- IMPACT ATTENUATOR, (UNI-DIRECTIONAL)*
- * MAINTAIN 2' MIN. OFFSET FROM PAVEMENT MARKING TO NEAR FACE OF ATTENUATOR.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJB
CHECKED GKB

MAINTENANCE OF TRAFFIC PHASE-1 STA. 153+00 TO STA. 169+00

MOT-75-0.76

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJB
CHECKED GKB

MAINTENANCE OF TRAFFIC PHASE-1
STA. 169+00 TO STA. 183+00

MOT-75-0.76

15
106

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJB
CHECKED GKB

MAINTENANCE OF TRAFFIC PHASE-1A
STA. 167+50 TO STA. 183+00

MOT-75-0.76

16
106

EXISTING
R9-3-18x18

Sn1, Sn4, Sn5

PROPOSED
R9-3-18

Sn14, Sn15

RELOCATED
R10-3b(R)-9x12

Sn12

RELOCATED
R10-3b(L)-9x12

Sn13

RELOCATED
M4-5-24x12
M1-5-3-30x24
M6-1-21x15

Sn11

RELOCATED
R9-3-18x18

Sn3

EXISTING
R10-10L-24

Sn8, Sn9

RELOCATED
R10-10L-24

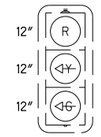
Sn6, Sn7

RELOCATED
R10-10L-24

Sn10

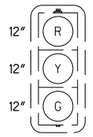
EXISTING
PEDESTRIAN
SIGNAL HEAD

PS-1,
PS-2, PS-3, PS-4
(COVER PS-1, PS-2)



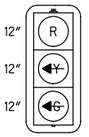
EXISTING
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)

E3, E4



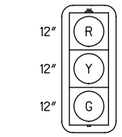
EXISTING
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)

E1,
E2, W1, W2



RELOCATED
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)

N3, N4

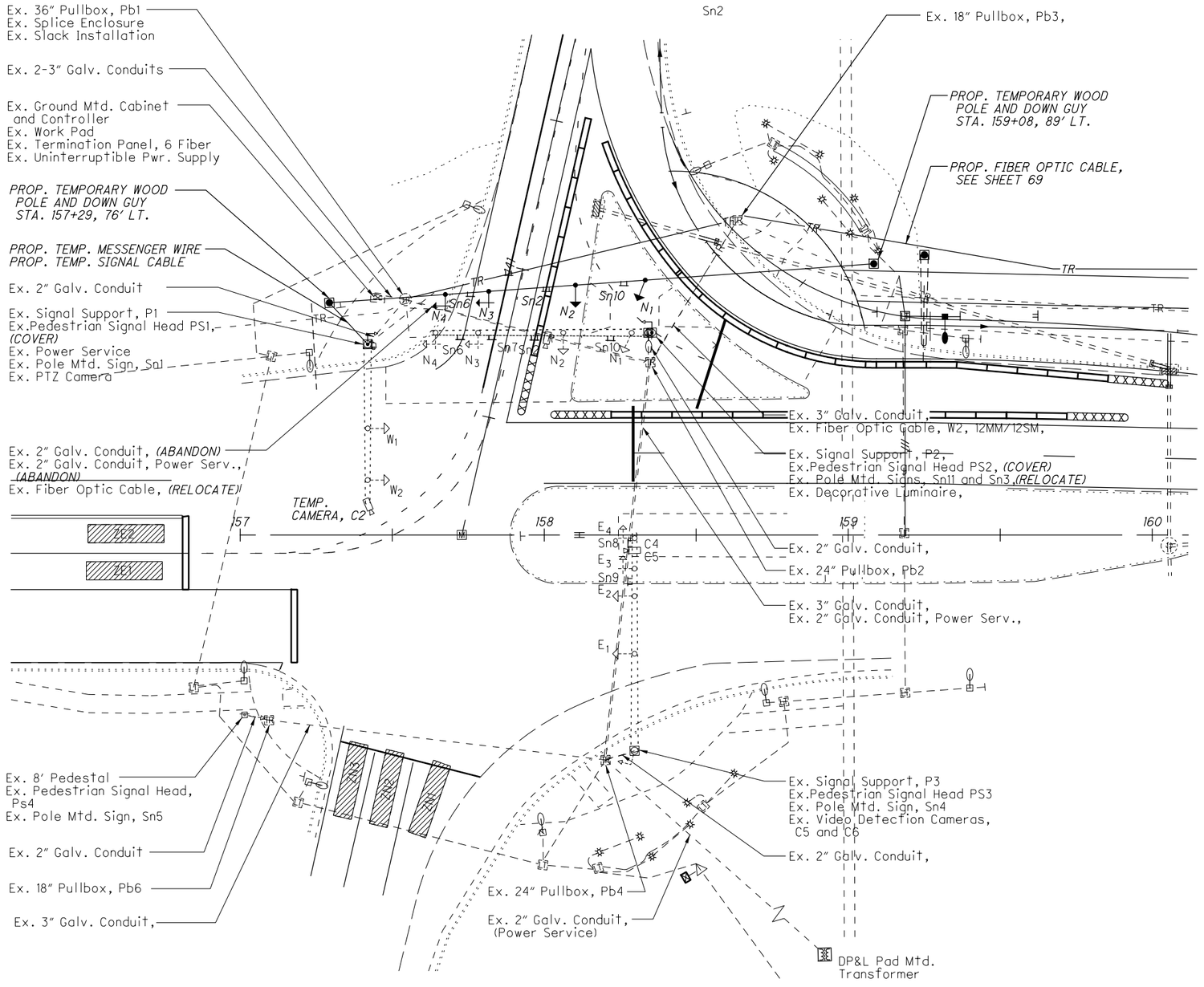


RELOCATED
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)

N1, N2

RELOCATED
D3-1

Sn2



NOTES :

1. *MAINTAIN EXISTING DETECTION ZONES.*
2. *USE EXISTING SIGNAL TIMINGS.*
3. *SEE MAINTENANCE OF TRAFFIC PLANS FOR SIGNING.*

LEGEND

	PROP	*EXIST*
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●→	○→
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS	●↓	○↓
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●↓→	○↓→
SIGNAL SUPPORT POLE	◉	◎
PEDESTRIAN SIGNAL	┐	┐
PEDESTRIAN PUSH BUTTON	⊣	⊸
PEDESTAL SUPPORT	⊡	⊡
LUMINAIRE, CONVENTIONAL	●—	○—
CONTROLLER CABINET AND WORK PAD (332)	▭	▭
CONTROLLER CABINET AND WORK PAD (TS-2)	▭	▭
TRAFFIC PULL BOX	PB	PB
VIDEO DETECTION CAMERA	■	□
DILEMMA ZONE RADAR DETECTION UNIT	◀D	◁D
STOP BAR RADAR DETECTION UNIT	◀S	◁S
PTZ CAMERA		
ETHERNET RADIO	⊣	⊣
LOOP DETECTOR	▭	▭
DETECTION ZONE	▨	▨

N

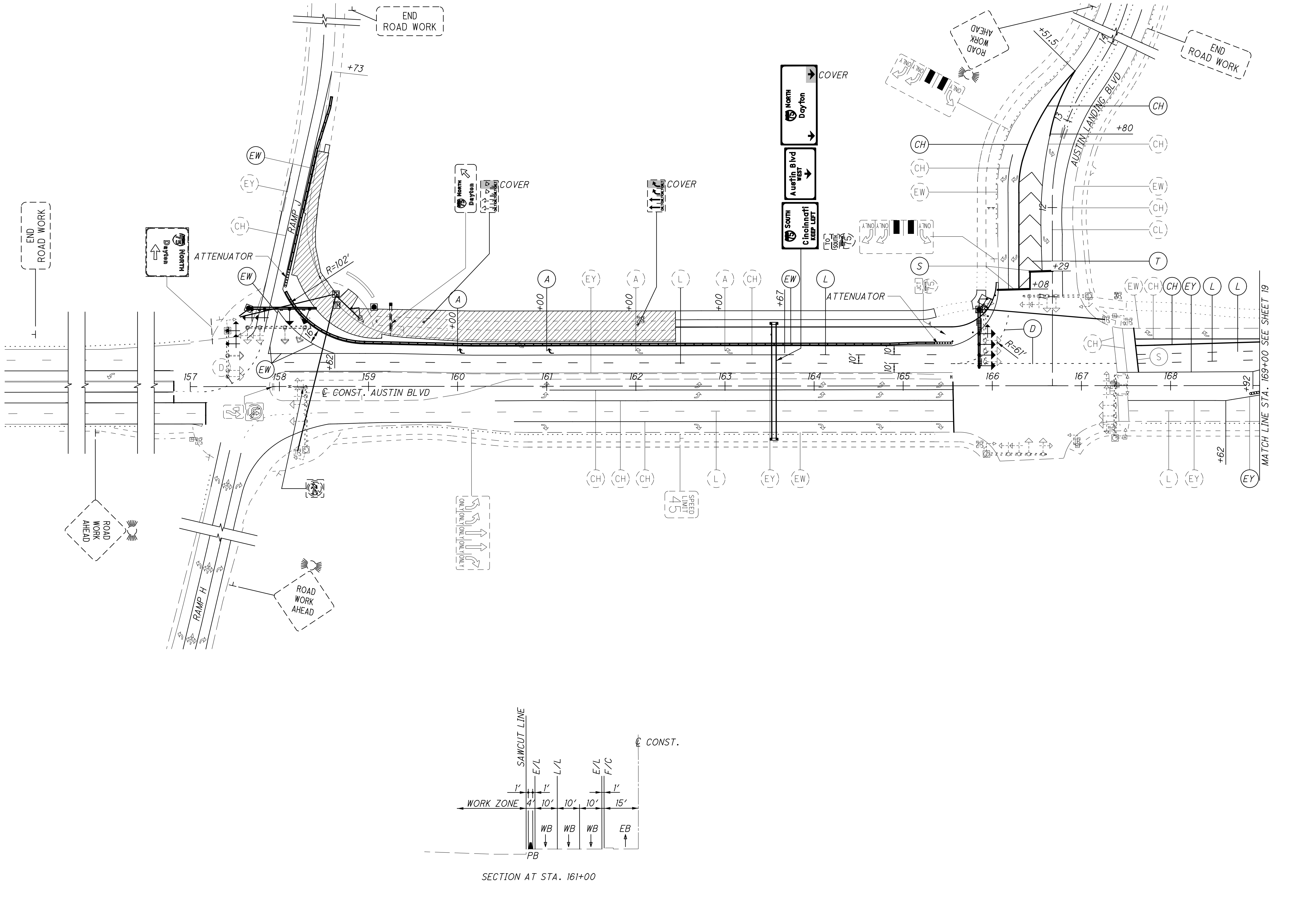
0 20 40 80
HORIZONTAL SCALE IN FEET

CALCULATED LAS
CHECKED PCG

TEMPORARY TRAFFIC SIGNAL PLAN - PHASE 1 & 1A
RAMP H, RAMP J AND AUSTIN BLVD.

MOT-75-0.76

17
106



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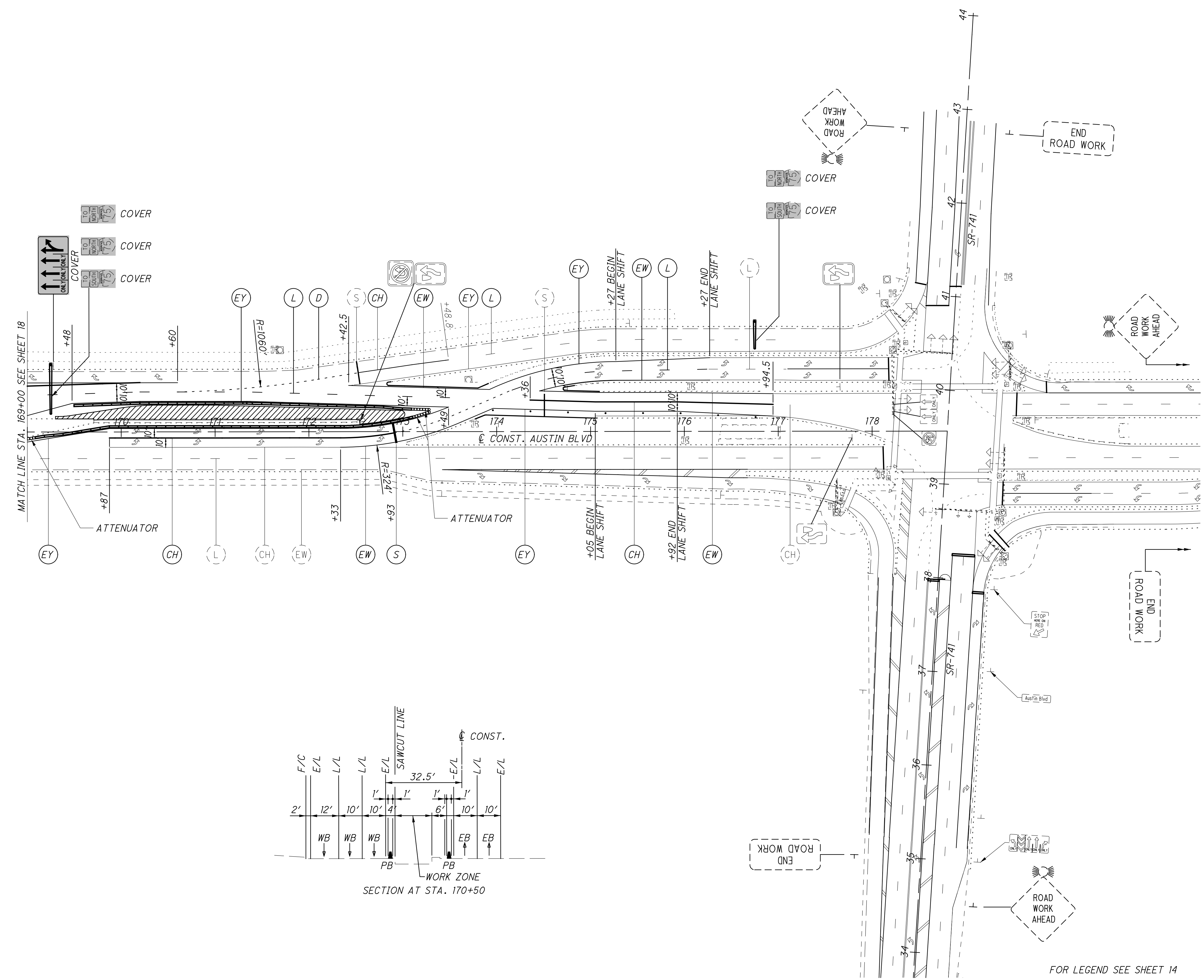
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED DJB
CHECKED GKB

MAINTENANCE OF TRAFFIC PHASE-2
STA. 153+00 TO STA. 169+00

MOT-75-0.76

MAINTENANCE OF TRAFFIC PHASE-2
STA. 167+50 TO STA. 183+00



FOR LEGEND SEE SHEET 14

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED	CHECKED
DJB	GKB

MOT-75-0.76

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJB
CHECKED GKB

MAINTENANCE OF TRAFFIC PHASE-2A
STA. 167+50 TO STA. 183+00

MOT-75-0.76

20
106

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS		7		9			23	24		37	43	47	01/IMS/OT						
																		ROADWAY	
													LS	201	11000	LS		CLEARING AND GRUBBING	
							540						540	202	23000	540	SY	PAVEMENT REMOVED	
							1,601						1,601	202	23010	1,601	SY	PAVEMENT REMOVED, ASPHALT	
							1,072						1,072	202	30000	1,072	SF	WALK REMOVED	
							451						451	202	30800	451	SY	TRAFFIC ISLAND REMOVED	
							169						169	202	32000	169	FT	CURB REMOVED	
							890						890	202	32500	890	FT	CURB AND GUTTER REMOVED	
							165						165	202	35100	165	FT	PIPE REMOVED, 24" AND UNDER	
							9						9	202	58100	9	EACH	CATCH BASIN REMOVED	
				50						1,277	283	275	1,885	203	10000	1,885	CY	EXCAVATION	
				50						133	15	12	210	203	20000	210	CY	EMBANKMENT	
4,184													4,184	204	10000	4,184	SY	SUBGRADE COMPACTION	
										337			337	204	13000	337	CY	EXCAVATION OF SUBGRADE	
													45	204	30010	45	CY	GRANULAR MATERIAL, TYPE B	
350													350	204	30020	350	CY	GRANULAR MATERIAL, TYPE C	
1,050													1,050	204	50000	1,050	SY	GEOTEXTILE FABRIC	
							375						375	608	52000	375	SF	CURB RAMP	
																		EROSION CONTROL	
		3											3	601	21050	3	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
								31					31	601	21060	31	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
		2											2	659	00100	2	EACH	SOIL ANALYSIS TEST	
		670						37					707	659	00300	707	CY	TOPSOIL	
		6,366											6,366	659	10000	6,366	SY	SEEDING AND MULCHING	
		319											319	659	14000	319	SY	REPAIR SEEDING AND MULCHING	
		319											319	659	15000	319	SY	INTER-SEEDING	
		0.89											0.89	659	20000	0.89	TON	COMMERCIAL FERTILIZER	
		1.32											1.32	659	31000	1.32	ACRE	LIME	
		37											37	659	35000	37	MGAL	WATER	
								335					335	670	00700	335	SY	DITCH EROSION PROTECTION	
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													24,000	832	30000	24,000	EACH	EROSION CONTROL	
																		DRAINAGE	
								991					991	605	11110	991	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
		50											50	605	13300	50	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
								132					132	611	00510	132	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
		50											50	611	00900	50	FT	6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
		50											50	611	01100	50	FT	6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
		50											50	611	01400	50	FT	6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	
		50											50	611	01500	50	FT	6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	
		50											50	611	01500	50	FT	6" CONDUIT, TYPE F	
								198					198	611	04400	198	FT	12" CONDUIT, TYPE B	
								7					7	611	05900	7	FT	15" CONDUIT, TYPE B	
								7					7	611	07400	7	FT	18" CONDUIT, TYPE B	
								3					3	611	98150	3	EACH	CATCH BASIN, NO. 3	
								1					1	611	98151	1	EACH	CATCH BASIN, NO. 3, AS PER PLAN	8
								5					5	611	98180	5	EACH	CATCH BASIN, NO. 3A	
								7					7	611	99574	7	EACH	MANHOLE, NO. 3	
		2						1					3	611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
9,188													9,188	254	01000	9,188	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	
356													356	255	20000	356	FT	FULL DEPTH PAVEMENT SAWING	
320		16											336	301	46000	336	CY	ASPHALT CONCRETE BASE, PG64-22	
610													610	304	20000	610	CY	AGGREGATE BASE	
976													976	407	10000	976	GAL	TACK COAT	
26													26	441	50000	26	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
442													442	442	10000	442	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
104													104	442	10100	104	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	

CALCULATED BMG
CHECKED MAG

GENERAL SUMMARY

MOT-75-0.76

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS		7		9	10	11	12	13		102	105	106	01/IMS/OT						
																		PAVEMENT CONT.	
599													599	451	20000	599	SY	REINFORCED CONCRETE PAVEMENT, MISC.: 4" ENHANCED CONCRETE	7
756													756	452	13010	756	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	
967													967	609	12000	967	FT	COMBINATION CURB AND GUTTER, TYPE 2	
717													717	609	26000	717	FT	CURB, TYPE 6	
																		LIGHTING	
																		FOR LIGHTING, SEE SHEET 98	
																		TRAFFIC CONTROL	
																		FOR TRAFFIC CONTROL, SEE SHEET 55	
																		TRAFFIC SIGNALS	
																		FOR TRAFFIC SIGNALS, SEE SHEET 77	
																		LANDSCAPING	
											5		5	661	20061	5	EACH	DECIDUOUS SHRUB, 3' HEIGHT, AS PER PLAN (KNOCK OUT ROSE)	103
											4		4	661	30041	4	EACH	EVERGREEN SHRUB, 18" HEIGHT, AS PER PLAN (BROADMOOR JUNIPER)	103
											3		3	661	40081	3	EACH	DECIDUOUS TREE, 2" CALIPER, AS PER PLAN (WINTER KING HAWTHORN)	103
											8		8	661	40121	8	EACH	DECIDUOUS TREE, 3" CALIPER, AS PER PLAN (SYCAMORE)	103
										61			61	661	99900	61	EACH	PLANTING, MISC.: FERTILIZER PACKETS	102
												1	1	SPECIAL	68043100	1	EACH	COMPLETE IRRIGATION SYSTEM	106
																		MISCELLANEOUS STRUCTURE	
		60											60	512	33300	60	SY	TYPE A WATERPROOFING	
																		MAINTENANCE OF TRAFFIC	
				585									585	254	01000	585	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
					80								80	614	11110	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						1,430	1,220	200					2,850	614	11630	2,850	FT	INCREASED BARRIER DELINEATION	
						6	6	2					14	614	12336	14	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
						46	36	14					96	614	12800	96	EACH	WORK ZONE RAISED PAVEMENT MARKER	
						36	29	5					70	614	13310	70	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
					1								1	614	18601	1	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
						0.25	0.25	0.06					0.56	614	20000	0.56	MILE	WORK ZONE LANE LINE, CLASS I, 4"	
						1.03	1.02	0.2					2.25	614	22000	2.25	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
						2,054	1,276	265					3,595	614	23000	3,595	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
						687	691						1,378	614	23400	1,378	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	
						292	415	122					829	614	24000	829	FT	WORK ZONE DOTTED LINE, CLASS I	
							198						198	614	25000	198	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I	
						11	81	20					112	614	26000	112	FT	WORK ZONE STOP LINE, CLASS I	
						8							8	614	30000	8	EACH	WORK ZONE ARROW, CLASS I	
				376									376	615	20000	376	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
				10									10	616	10000	10	MGAL	WATER	
						1,430	1,220	200					2,850	622	41000	2,850	FT	PORTABLE BARRIER, 32"	
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													6	619	16010	6	MNTH	FIELD OFFICE, TYPE B	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

CALCULATED BMG
CHECKED MAG

GENERAL SUMMARY

MOT-75-0.76

ROADWAY SUBSUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION						202									608
								PAVEMENT REMOVED	PAVEMENT REMOVED, ASPHALT	WALK REMOVED	TRAFFIC ISLAND REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED		CURB RAMP
								SY	SY	SF	SY	FT	FT	FT	EACH		SF
R-1		NOT USED															
R-2	25	158+04.59	LT	TO	158+96.00	LT		540									
R-3	25	158+08.83	LT	TO	158+87.19	LT					271						
R-4	25	158+41.46	LT	TO	166+04.25	LT							889				
R-5	25	158+49.99	LT	TO	159+05.64	LT				1018							
R-6	25	158+50.94	LT	TO	158+56.71	LT								6			
R-7	25-26	158+04.12	LT	TO	166+08.84	LT			242								
R-8	25-26	159+02.57	LT	TO	165+37.18	LT			705								
R-9	25	159+99.83	LT	TO	160+05.60	LT								12	1		
R-10	26	162+52.00	LT	TO	162+58.00	LT								6	1		
R-11	26	163+79.82	LT	TO	163+79.82	LT								6	1		
R-12	26	164+40.17	LT	TO	164+40.17	LT								6	1		
R-13	26	165+01.28	LT	TO	165+01.28	LT								6	1		
R-14	26	165+63.35	LT	TO	165+63.35	LT								6	1		
R-15	26	165+78.52	LT	TO	165+97.83	LT			35								
R-16	26	165+95.03	LT	TO	166+03.45	LT				54							
R-17	27	169+29.97	LT	TO	169+70.87	LT						41					
R-18	27	169+29.98	LT	TO	173+02.18	LT			462								
R-19	27	169+70.86	LT	TO	172+60.34	LT					55						
R-20	27-28	172+25.00	LT	TO	173+92.54	LT			82								
R-21	27-28	172+34.87	LT	TO	173+91.34	LT					110						
R-22	27	172+37.36	LT	TO	172+40.05	LT								12	1		
R-23	27	172+40.05	LT	TO	173+25.07	LT								85	1		
R-24	28	173+77.60	LT	TO	175+04.96	LT			54			128					
R-25	28	174+63.00	LT	TO	175+09.58	LT			21								
R-26	28	174+65.46	LT	TO	175+09.62	LT					15						
R-27	28	174+75.29	LT	TO	175+09.61	LT								20	1		
W-1	25	158+59.43	LT	TO	158+87.14	LT											228
W-2	26	165+83.67	LT	TO	166+00.96	LT											147
TOTALS CARRIED TO GENERAL SUMMARY								540	1601	1072	451	169	889	165	9		375

CALCULATED BMG
CHECKED MAG

REF NO.	SHEET NO.	STATION TO STATION	601 TIED CONCRETE BLOCK MAT, TYPE 2		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 CATCH BASIN, NO. 3	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3A	611 MANHOLE, NO. 3	611 PRECAST REINFORCED CONCRETE OUTLET		659 TOPSOIL	670 DITCH EROSION PROTECTION			BENDS AND BRANCHES FOR INFORMATION ONLY		
																						6"X22.5° BEND	6"X45° BEND	6"X90° BEND
			SY		FT	FT		FT	FT	FT	EACH	EACH	EACH	EACH	EACH		CY	SY					
		RAMP J																						
E-1	25	142+83.68 RT TO 142+92.36 RT	31																					
		AUSTIN BLVD																						
E-2	25-26	160+52.00 LT TO 164+53.14 LT															37	335						
D-1	25	158+50.94 LT TO 158+56.71 LT						6					1											
D-2	25	159+99.83 LT TO 160+05.60 LT						12						1										
D-3	25	160+05.60 LT						12					1											
D-4	26	162+55.00 LT						6						1										
D-5	26	162+55.00 LT						12			1													
D-6	26	163+79.82 LT TO 163+80.09 LT						6						1										
D-7	26	163+80.00 LT						12					1											
D-8	26	164+40.17 LT						6						1										
D-9	26	164+40.17 LT						12			1													
D-10	26	165+00.46 LT TO 165+01.28 LT						12					1											
D-11	26	165+01.28 LT TO 165+01.69 LT						6						1										
D-12	26	165+63.35 LT TO 165+65.85 LT						6						1										
D-13	26	165+63.35 LT TO 165+75.28 LT						20					1											
D-14	27	172+37.36 LT TO 172+40.05 LT						12						1										
D-15	27	172+40.05 LT TO 172+91.00 LT						51			1													
D-16	28	174+75.29 LT TO 174+87.56 LT						7	7	7		1												
UD-1	25-26	158+38.61 LT TO 165+35.71 LT			793	92										1						1		
UD-2	26	165+76.42 LT TO 166+03.75 LT			45	10																		
UD-3	27	172+42.60 LT TO 172+98.43 LT			49	10																	2	
UD-4	27-28	172+91.00 LT TO 173+90.36 LT			88	10																1		
UD-5	28	174+84.13 LT TO 175+09.62 LT			16	10																		
TOTALS CARRIED TO GENERAL SUMMARY			31		991	132		198	7	7	3	1	5	7	1		37	335						

CALCULATED BMG CHECKED MAG

DRAINAGE SUBSUMMARY

MOT-75-0.76

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY)	20.19 Ac	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.73
PROJECT EARTH DISTURBED AREA	1.32 Ac	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.73
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.25 Ac	POST-CONSTRUCTION BMP: A VEGETATED BIOFILTER IS PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS	
NOTICE OF INTENT EARTH DISTURBED AREA	4.90 Ac		
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	11.55 Ac	IMMEDIATE RECEIVING WATERS	TRIBUTARY TO CLEAR CREEK
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	11.73 Ac	SUBSEQUENT RECEIVING WATER	CLEAR CREEK

STORM WATER BMP - VEGETATED BIOFILTER					
LATITIDUE/LONGITUDE				EARNED DRAINAGE AREA (ACRES)	WIDTH
BEGIN		END			
39.597053	84.235517	39.597017	84.234154	0.35	4 FT.
			TREATMENT PROVIDED:	0.35	
			TREATMENT REQUIRED:	0.26	

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700' BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS, AND REVISE TRAFFIC CONTROL TO ACCOMMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.

LEGEND

- CATCH BASIN 3A
- CATCH BASIN 3
- CATCH BASIN 3, APP
- MANHOLE NO. 3

USGS MAP: SPRINGBORO, OHIO QUADRANGLE

LATITUDE: 39°35'48" *
LONGITUDE: 84°14'11" *

* LATITUDE AND LONGITUDE ARE APPROX. CENTER OF PROJECT

N

0 100 200 400 HORIZONTAL SCALE IN FEET

CALCULATED BMG
CHECKED MAG

PROJECT SITE PLAN

MOT-75-0.76

24A
106

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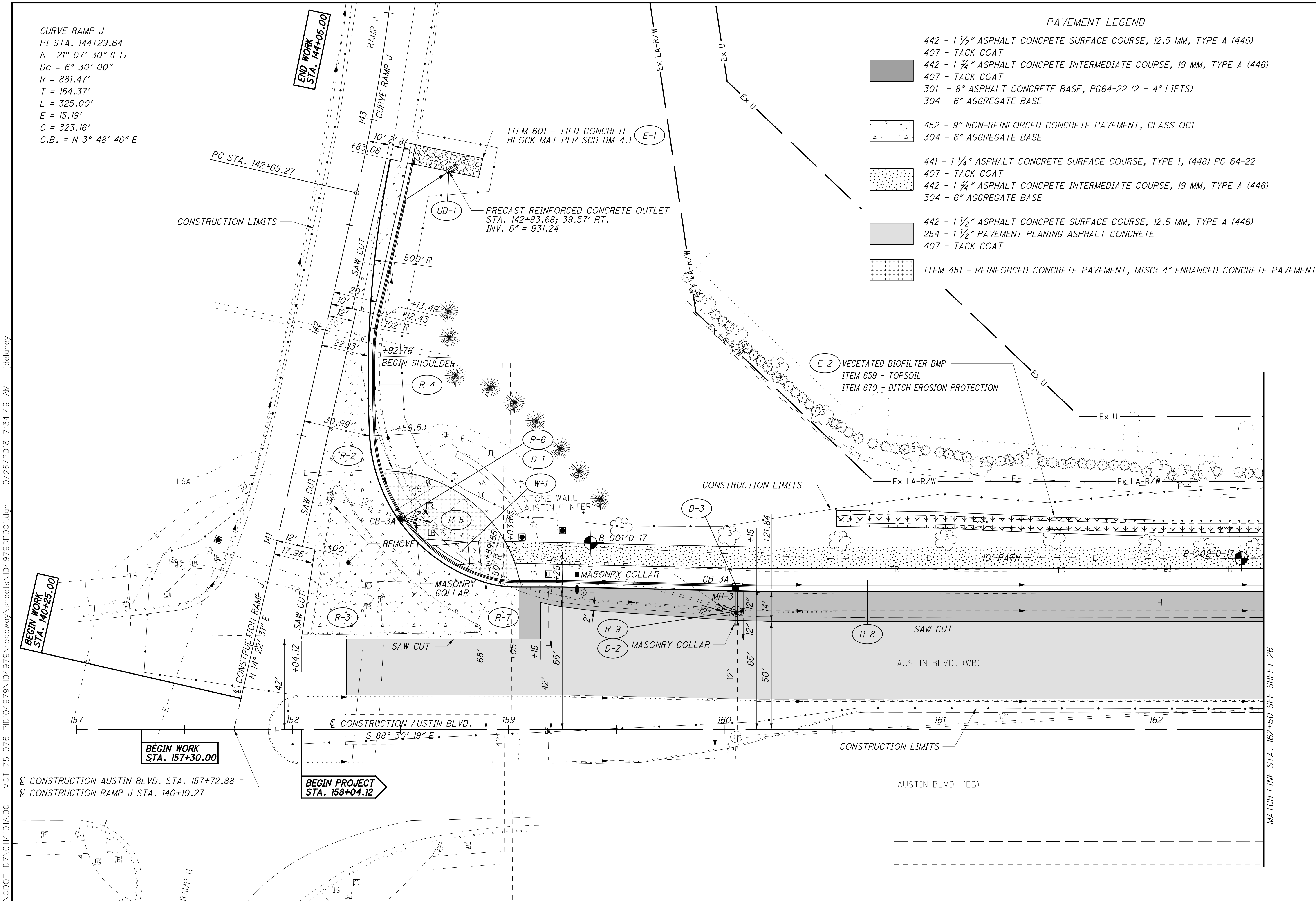


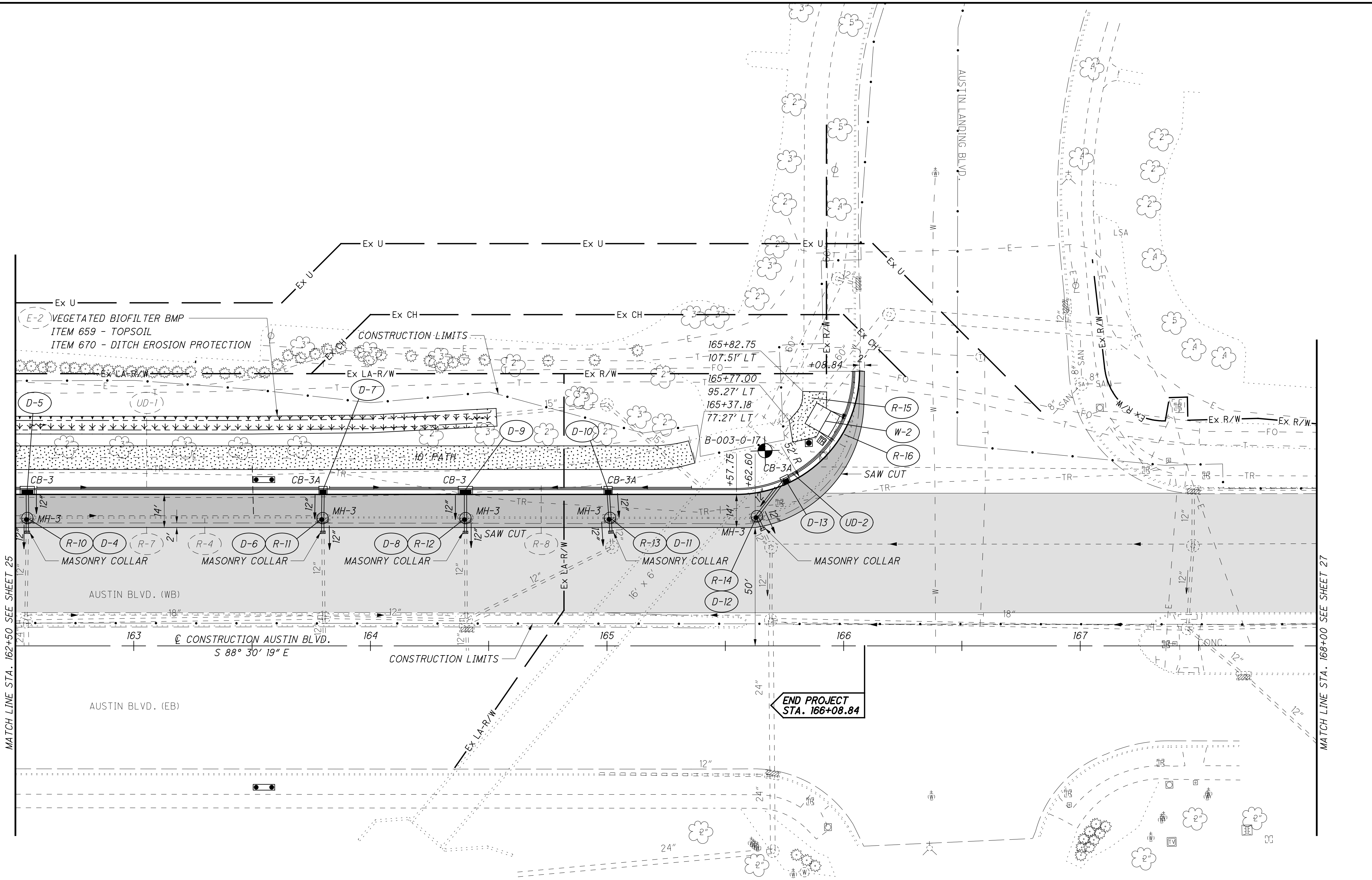
N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JMD CHECKED MAG

PLAN-RAMP J STA. 140+53.35 TO STA. 142+83.68
PLAN-AUSTIN BLVD. STA. 158+04.12 TO STA. 162+50.00

MOT-75-0.76

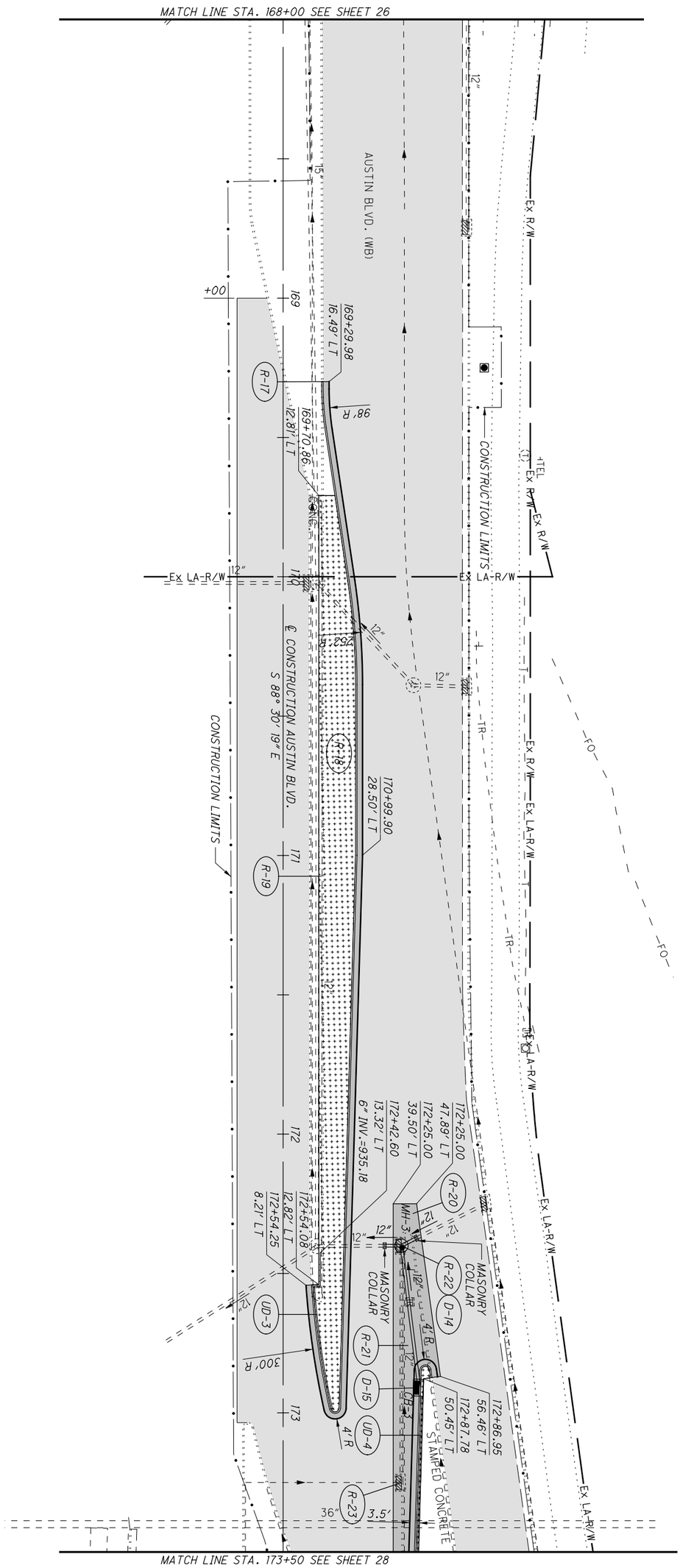


HORIZONTAL SCALE IN FEET

CALCULATED JMD
CHECKED MAG

PLAN - AUSTIN BLVD.
STA. 162+50.00 TO STA. 168+00.00

MOT-75-0.76



27 / 106	MOT-75-0.76	PLAN - AUSTIN BLVD. STA. 168+00.00 TO STA. 173+50.00	CALCULATED JMD CHECKED MAG	0 20 10 40 HORIZONTAL SCALE IN FEET

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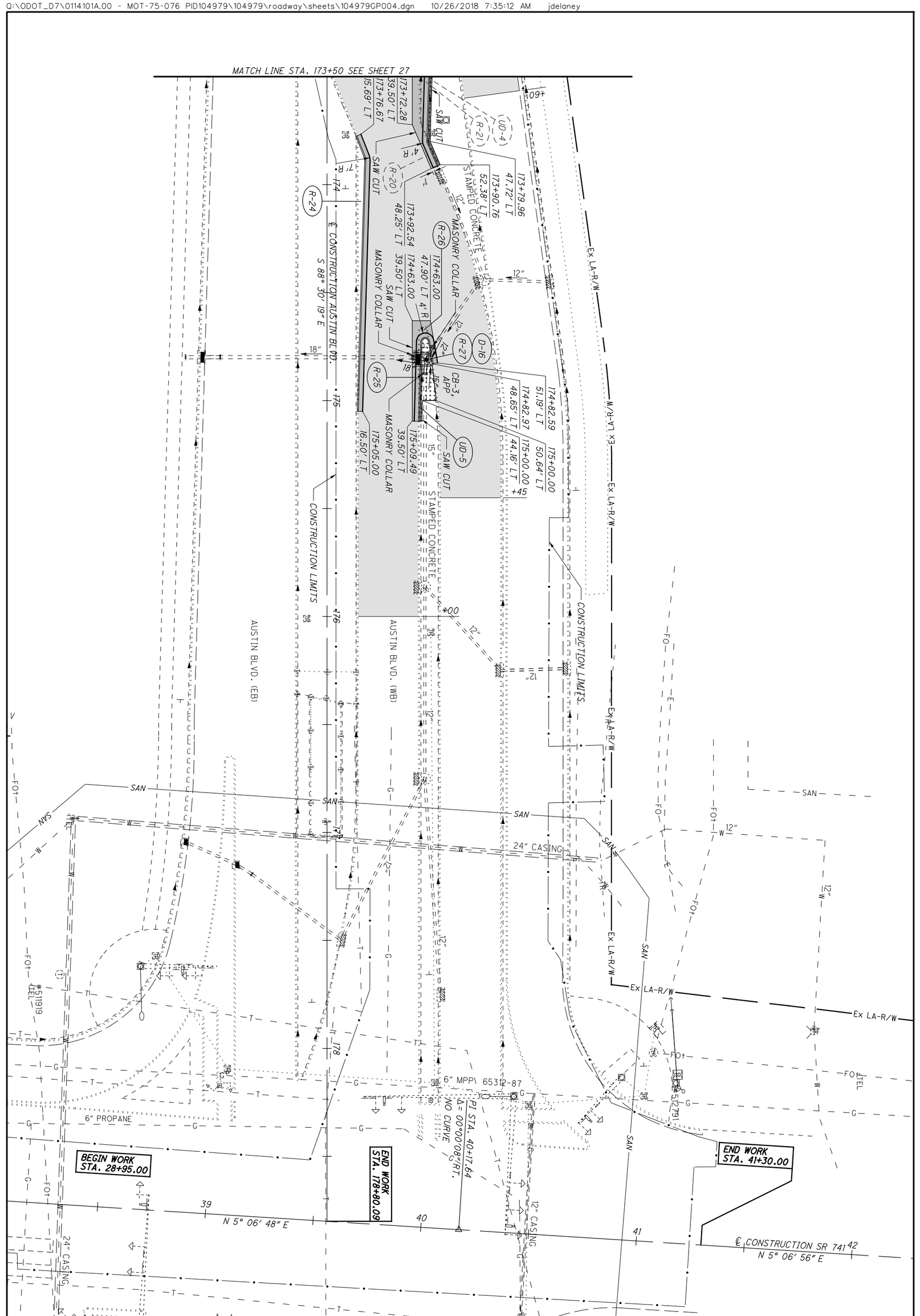
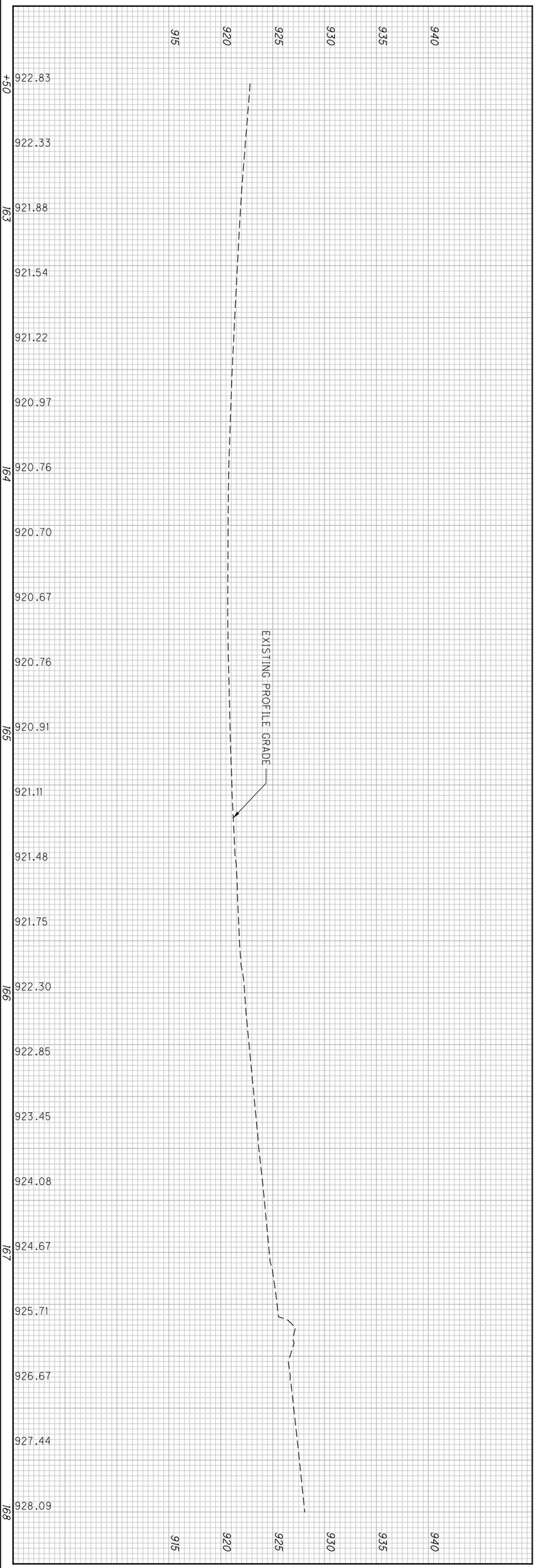
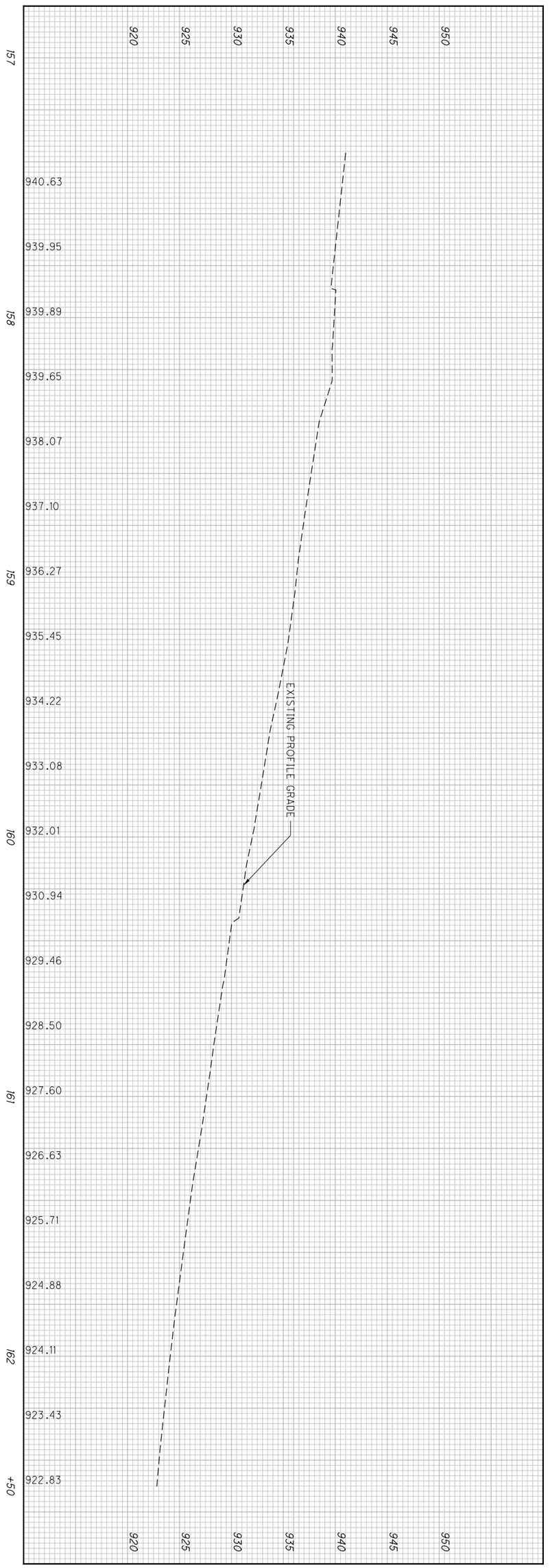
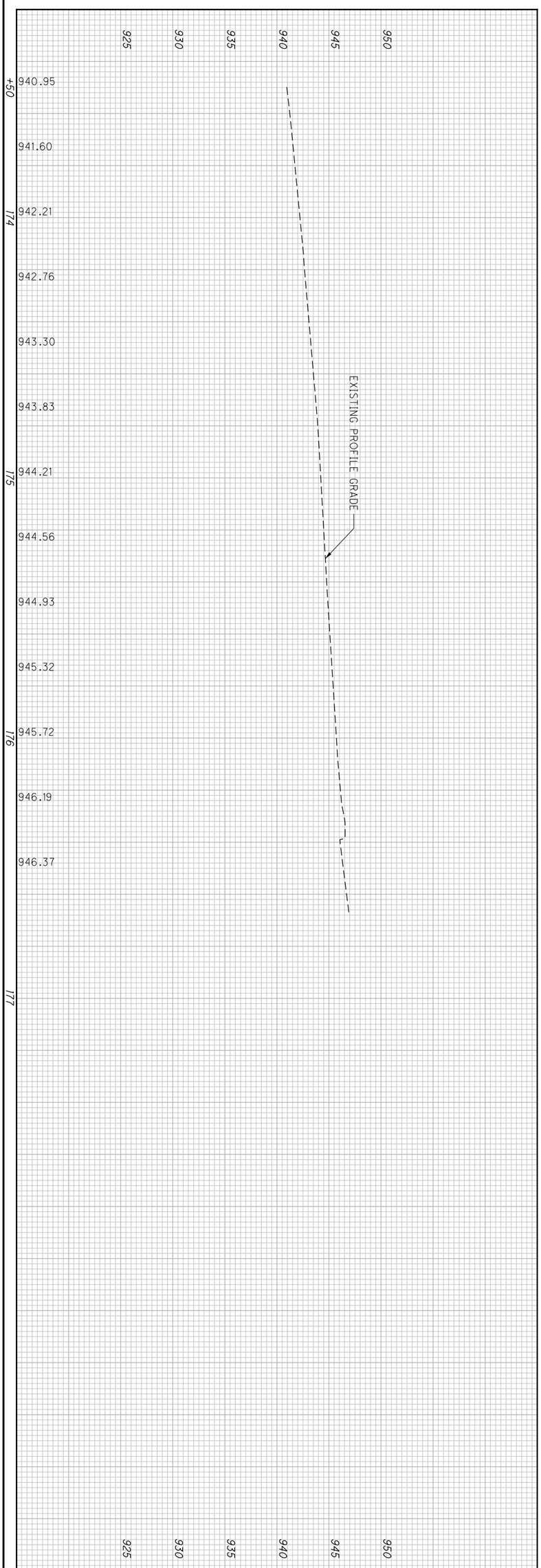


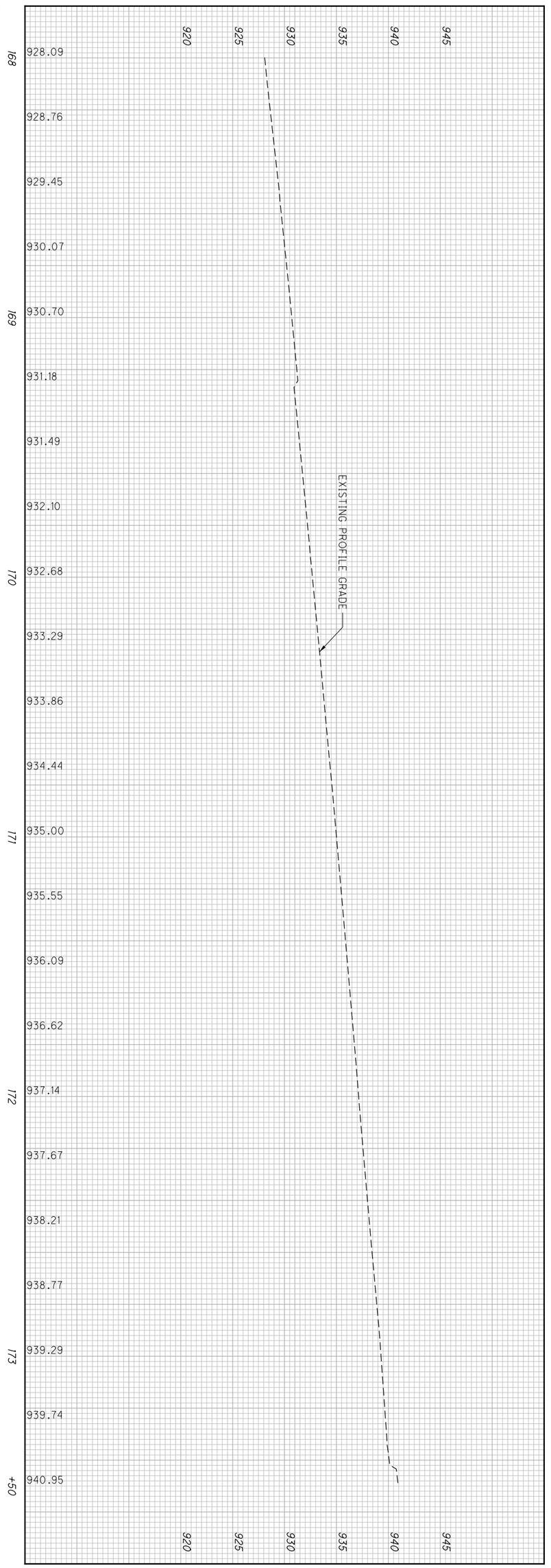
28 / 106	MOT-75-0.76	PLAN - AUSTIN BLVD. STA. 173+50.00 TO STA. 175+09.58	CALCULATED JMD / CHECKED MAG	HORIZONTAL SCALE IN FEET (0, 10, 20, 40)





29 / 106	MOT-75-0.76	PROFILE - AUSTIN BLVD. STA. 157+97.76 TO STA. 168+00.00	CALCULATED JMD CHECKED MAG





30/106

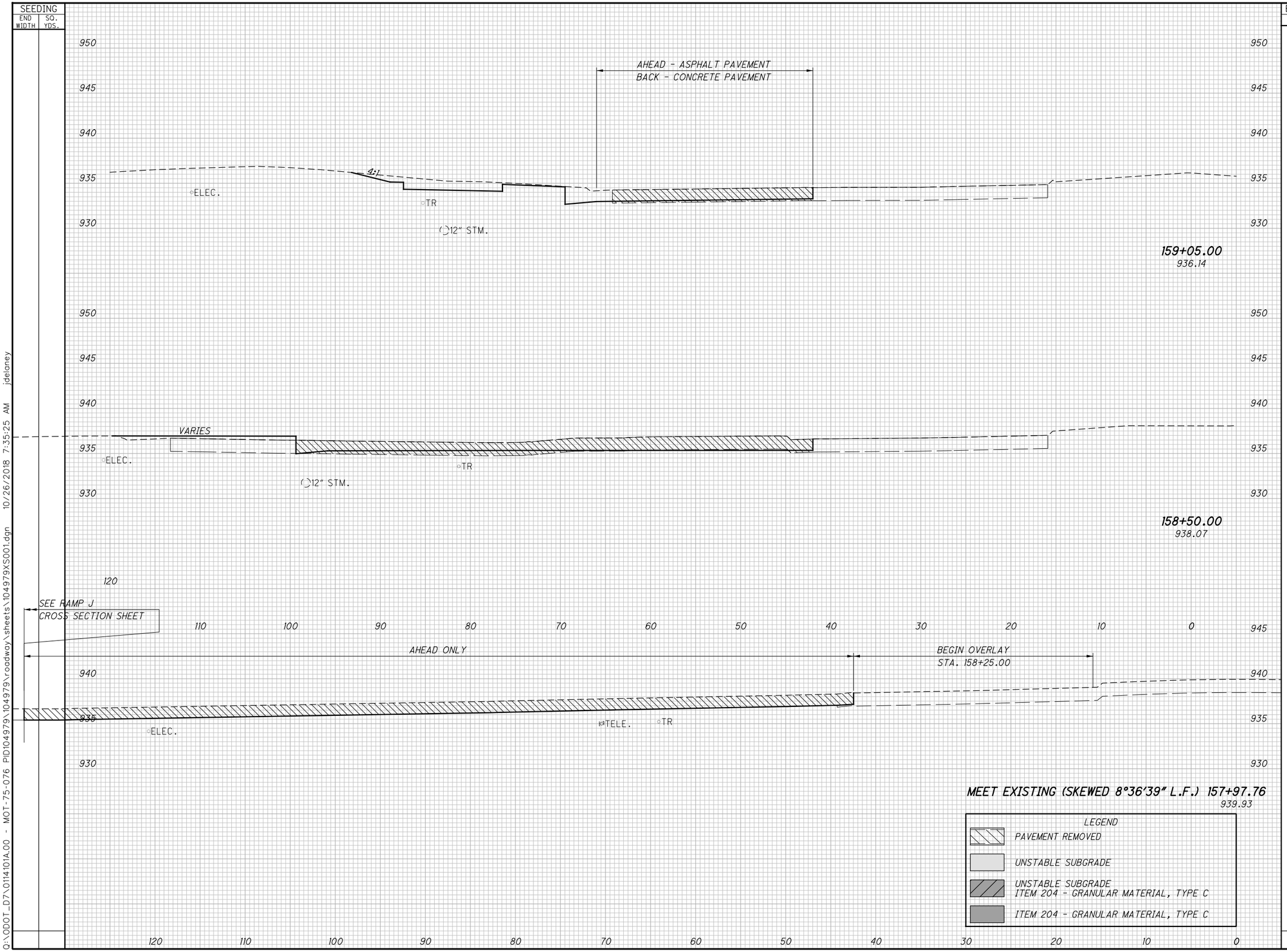
MOT-75-0.76

PROFILE - AUSTIN BLVD.
STA. 168+00.00 TO STA. 175+09.62

CALCULATED JMD
CHECKED MAG

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		23	0		
				25	7
		2	7		
		0	0		
				27	14

CALCULATED JMD | CHECKED MAG



CROSS SECTIONS - AUSTIN BLVD.
STA. 157+97.76 TO STA. 159+05.00

MOT-75-0.76

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
42	1		
		69	2

33	1		
		42	1

32	0		
		10	0
		121	3

CALCULATED JMD | CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 159+15.00 TO STA. 160+00.00

MOT-75-0.76

32
106

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
47	9		
		87	24
47	17		
		78	32
37	18		
		73	18
		238	74

CALCULATED JMD

CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 160+50.00 TO STA. 161+50.00

MOT-75-0.76

33
106

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
57	2		
		128	2
81	0		
		134	2
64	2		
		103	10
		365	14

CALCULATED JMD | CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 162+00.00 TO STA. 163+00.00

MOT-75-0.76

34
106

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
56	3
48	7
57	4

VOLUME	
CUT	FILL
96	9
97	10
106	6
299	25

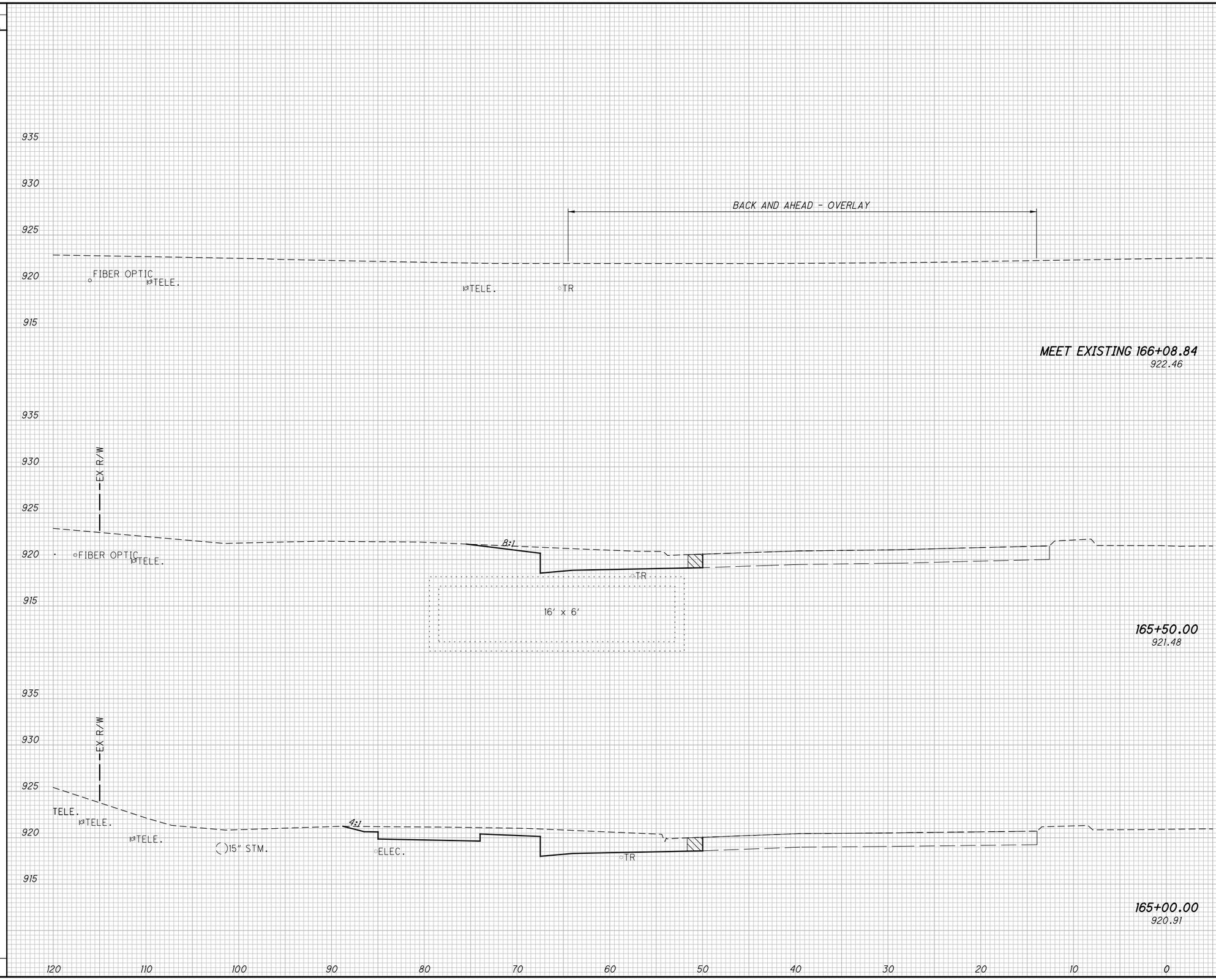
CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 163+50.00 TO STA. 164+50.00

MOT-75-0.76

35
106

SEEDING	
END WIDTH	SQ. YDS.



END AREA	
CUT	FILL
1	0
35	0
56	0

VOLUME	
CUT	FILL
39	0
84	0
104	3
227	3

CALCULATED	CHECKED
JMD	MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 165+00.00 TO STA. 166+08.84

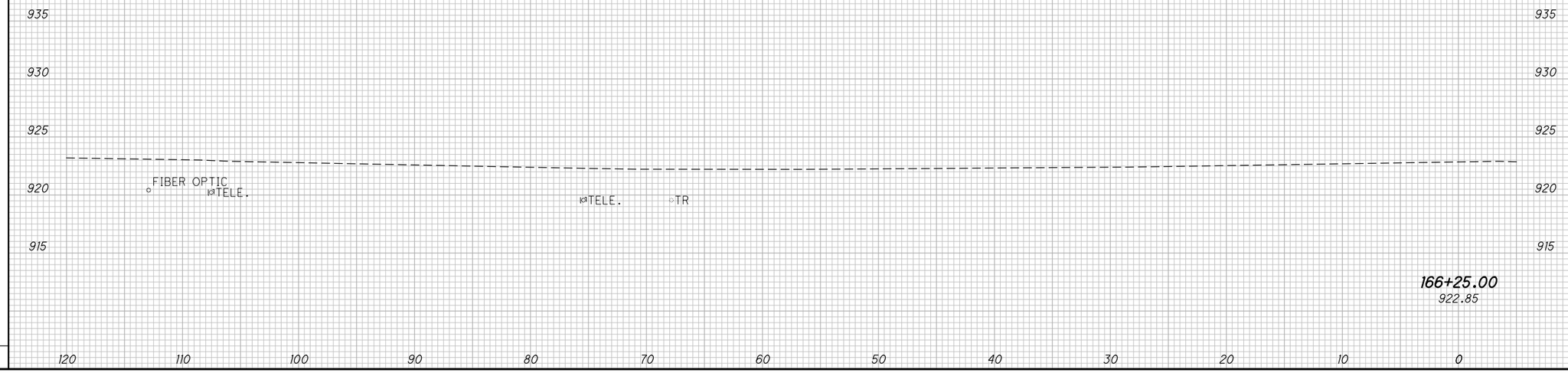
MOT-75-0.76

SEEDING	
END WIDTH	SQ. YDS.

TOTALS CARRIED TO GENERAL SUMMARY	
ITEM 203 - EXCAVATION	1277 CU YD
ITEM 203 - EMBANKMENT	133 CU YD
ITEM 204 - EXCAVATION OF SUBGRADE	337 CU YD
ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTES)	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JMD
CHECKED MAG



CROSS SECTIONS - AUSTIN BLVD.
STA. 166+25.00

MOT-75-0.76

37
106

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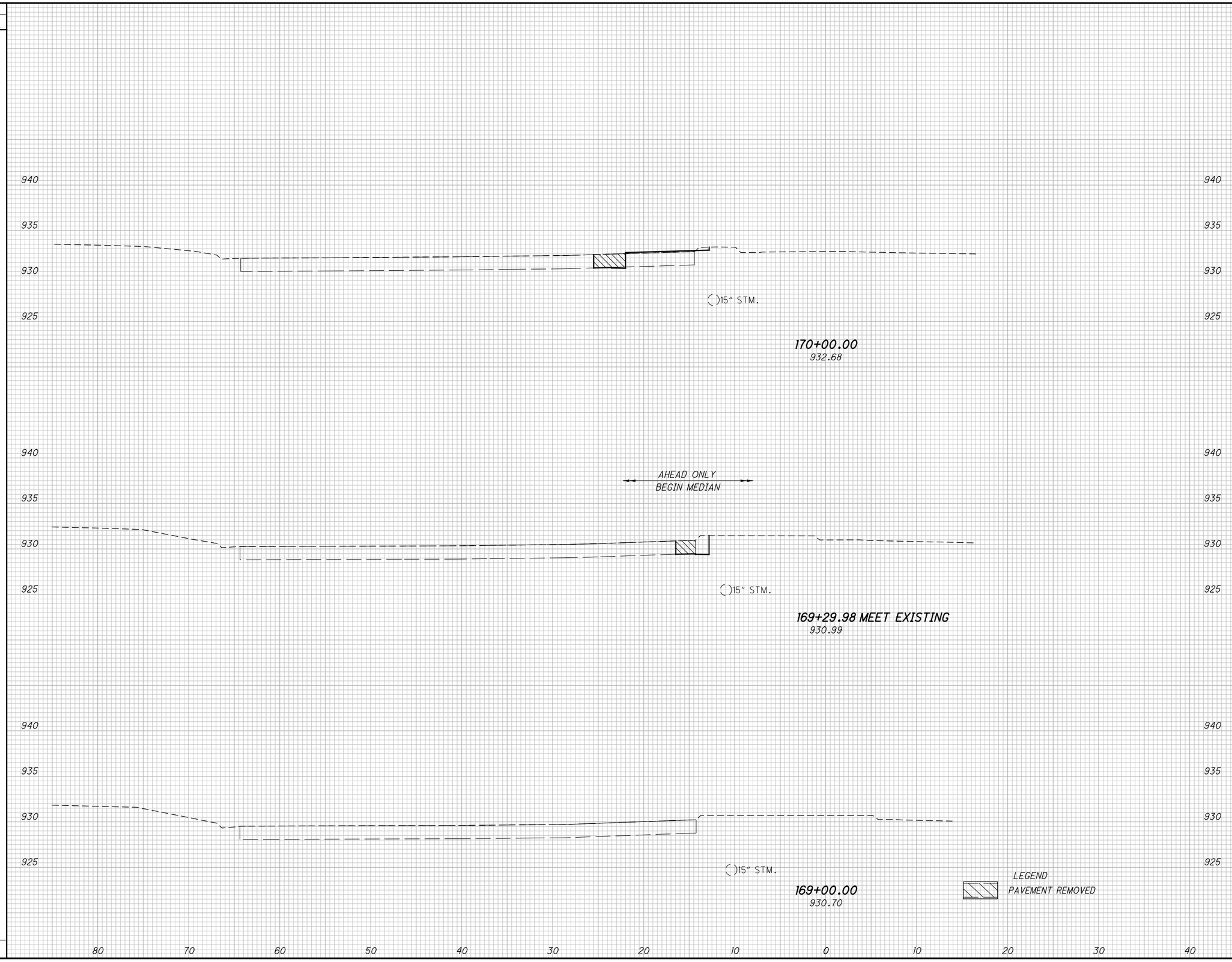
SEEDING	
END WIDTH	SQ. YDS.



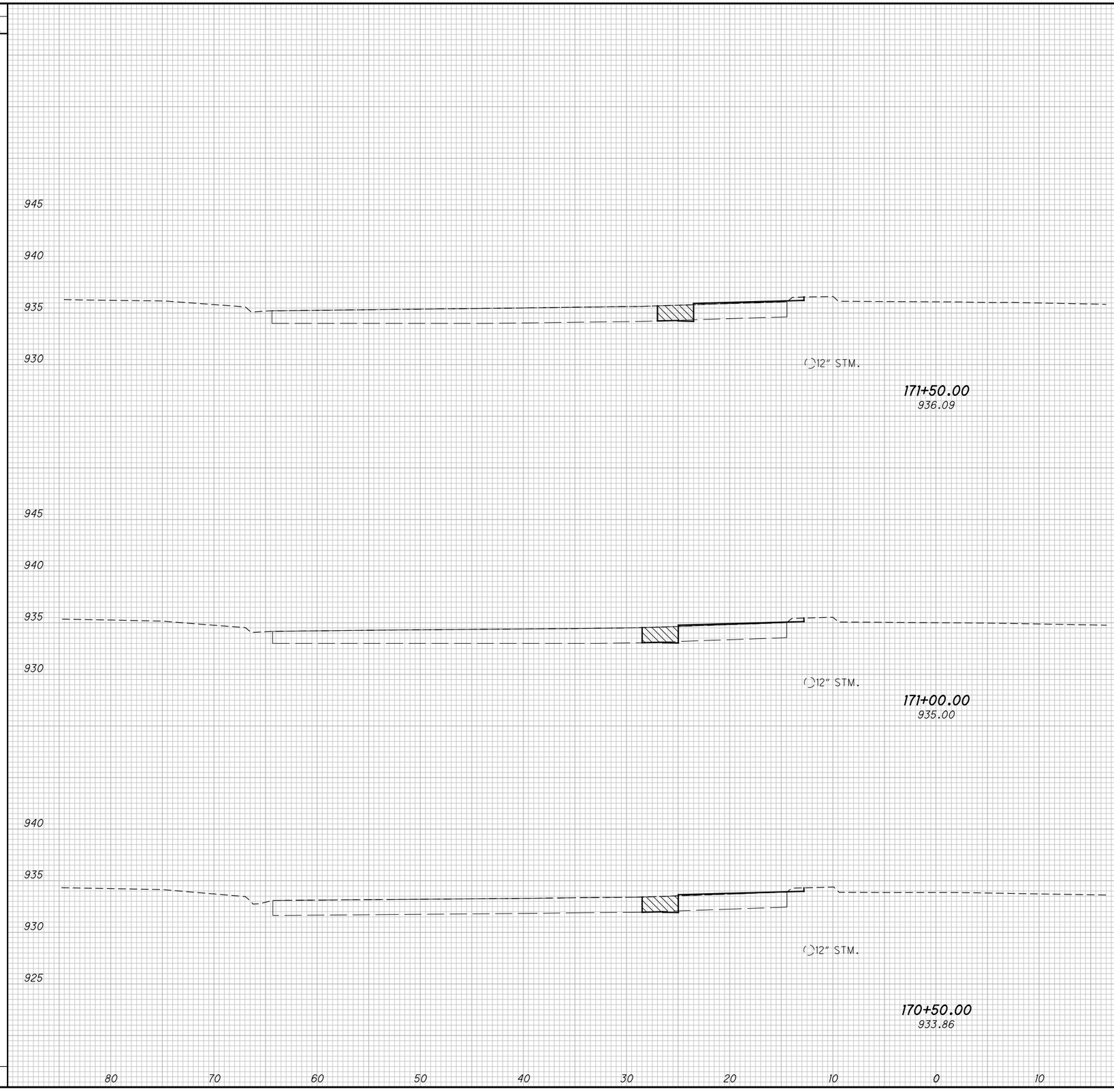
END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	1		
		16	1
6	0		
		16	1

CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 169+00.00 TO STA. 170+00.00

MOT-75-0.76

SEEDING	
END WIDTH	SQ. YDS.



END AREA	
CUT	FILL
6	1
6	1
6	1

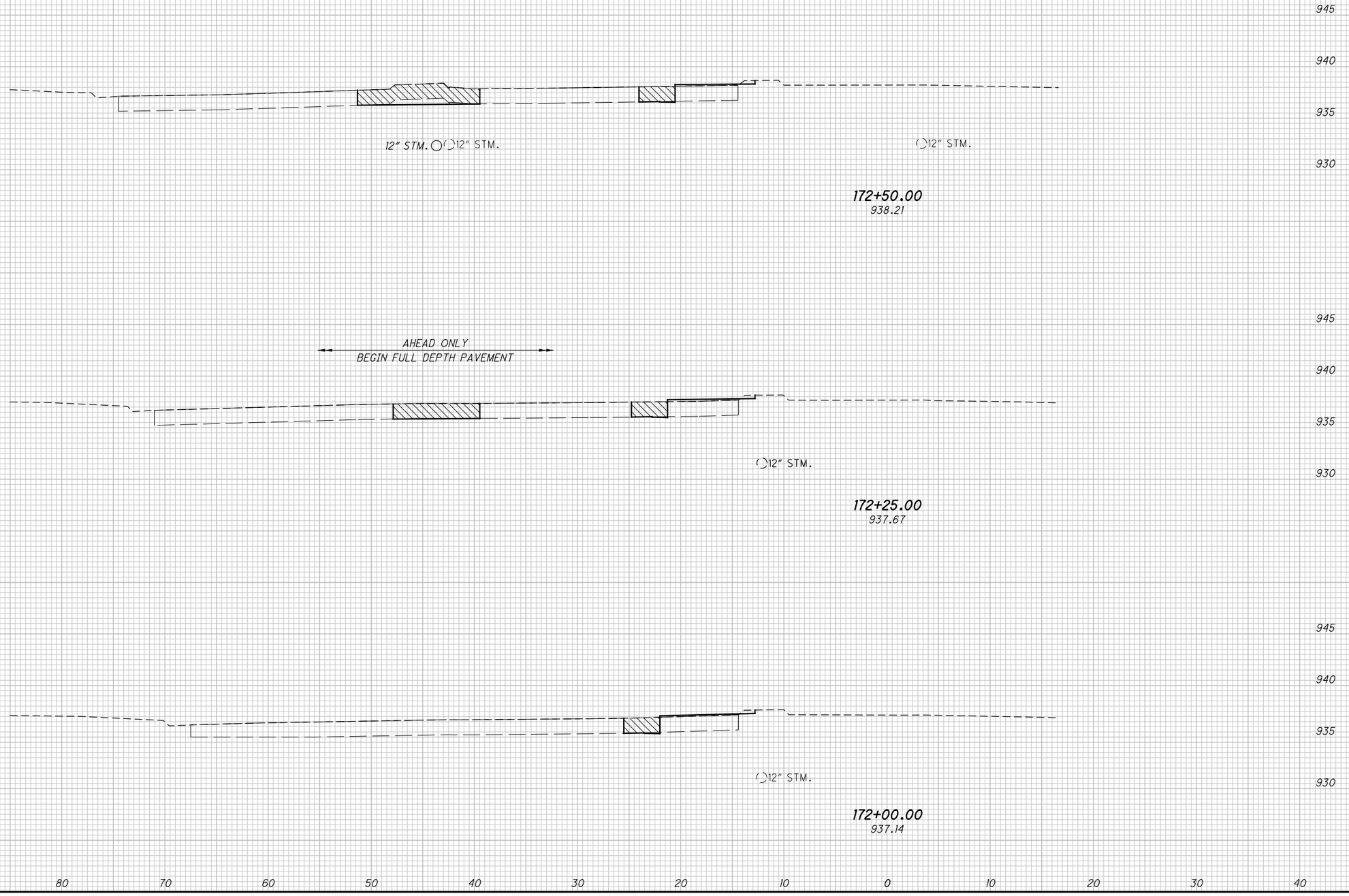
VOLUME	
CUT	FILL
11	2
11	2
11	2
33	6

CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 170+50.00 TO STA. 171+50.00

MOT-75-0.76

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	1		
		20	1
18	1		
		11	1
6	1		
		11	2
		42	4

CALCULATED JMD | CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 172+00.00 TO STA. 172+50.00

MOT-75-0.76

40
106

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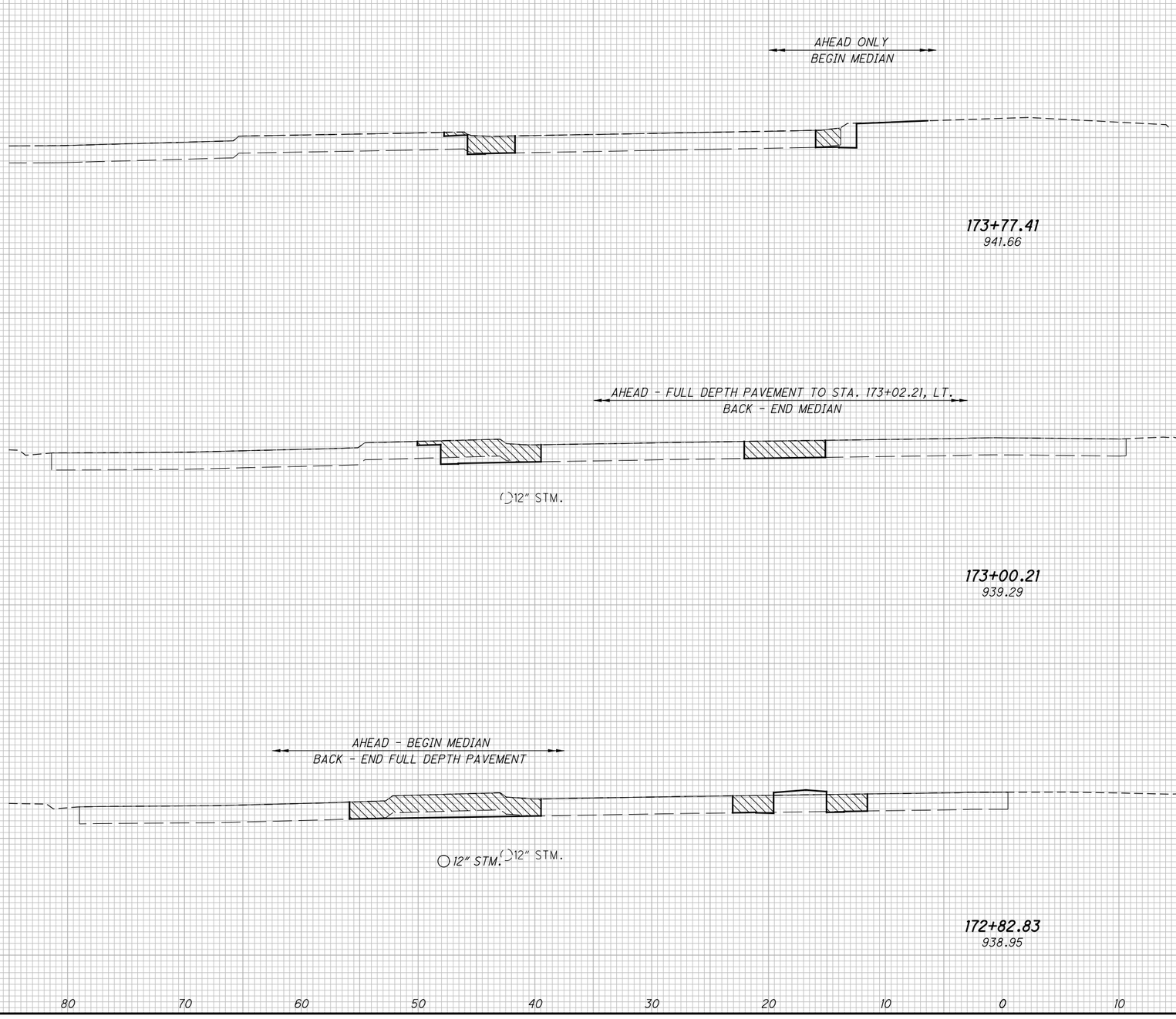
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	0		
		56	0
26	0		
		21	1
40	2		
		40	2
		117	3

CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 172+82.83 TO STA. 173+77.41

MOT-75-0.76

41
106

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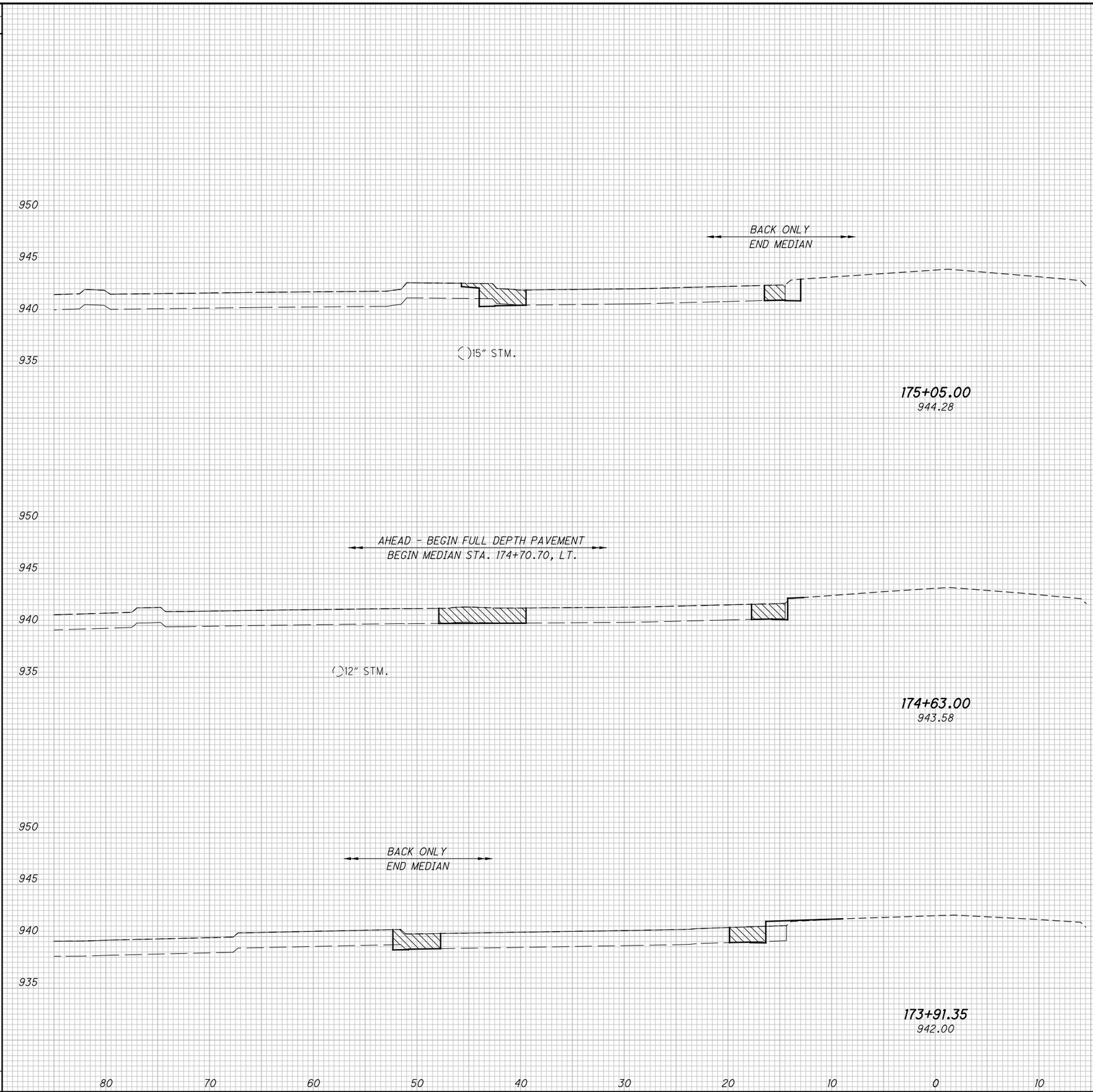
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	0		
		25	0
18	0		
		41	1
13	1		
		7	0
		73	1

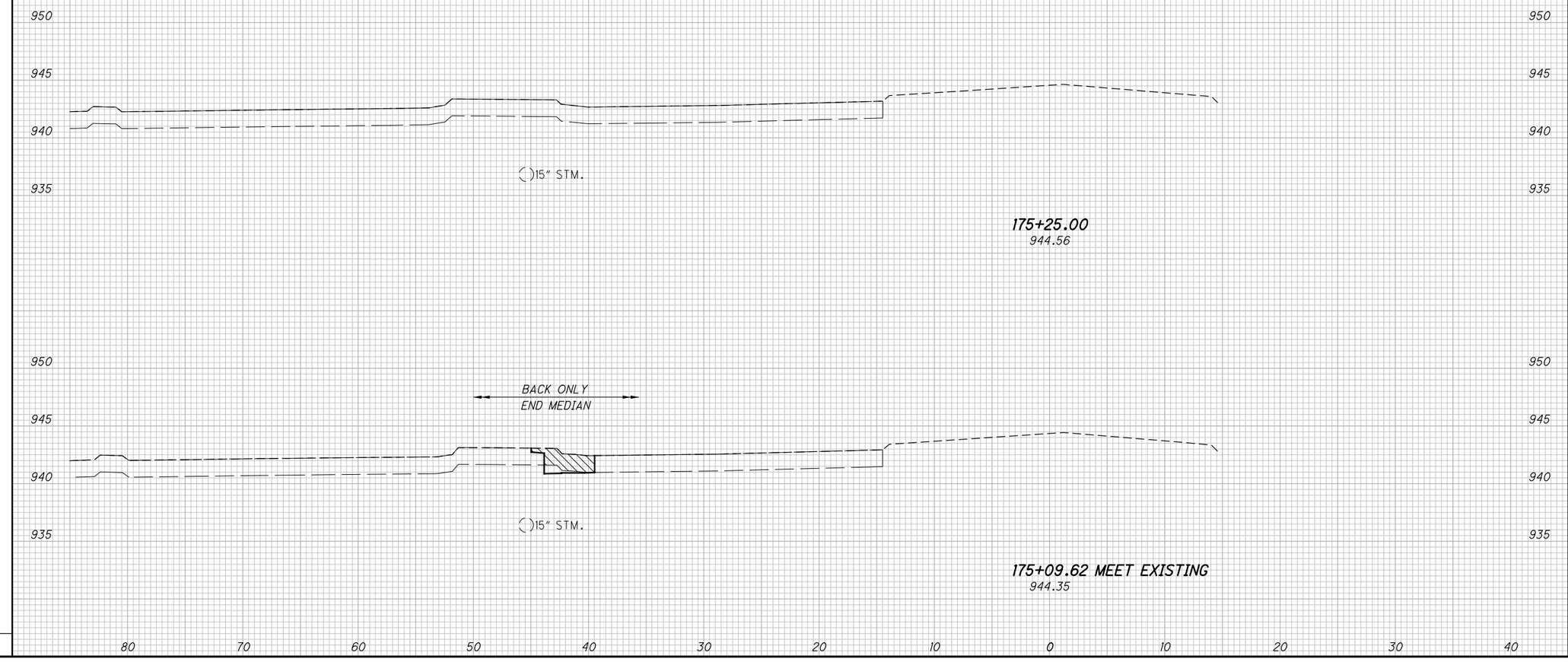
CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 173+91.35 TO STA. 175+05.00

MOT-75-0.76

SEEDING	
END WIDTH	SQ. YDS.

TOTALS CARRIED TO GENERAL SUMMARY	
ITEM 203 - EXCAVATION	283 CU YD
ITEM 203 - EMBANKMENT	15 CU YD
ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTES)	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	0		
		2	0
		2	0

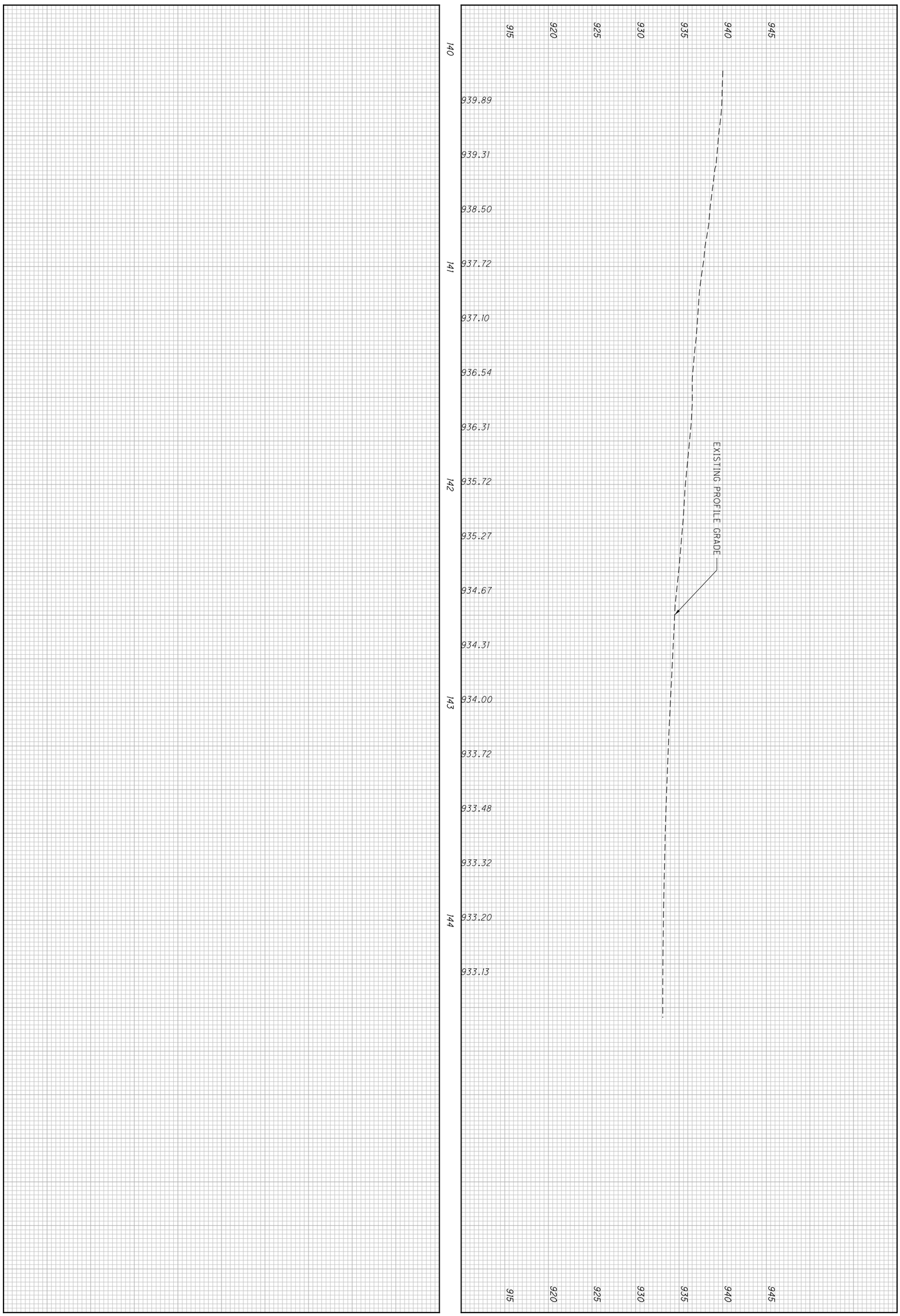
CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - AUSTIN BLVD.
STA. 175+09.62 TO STA. 175+25.00

MOT-75-0.76

43
106

Q:\ODOT_D7\0114101A.00 - MOT-75-076 PID104979\104979\roadway\sheets\104979XS002.dgn 10/26/2018 7:35:30 AM jdelaney



MOT-75-0.76

PROFILE - RAMP J

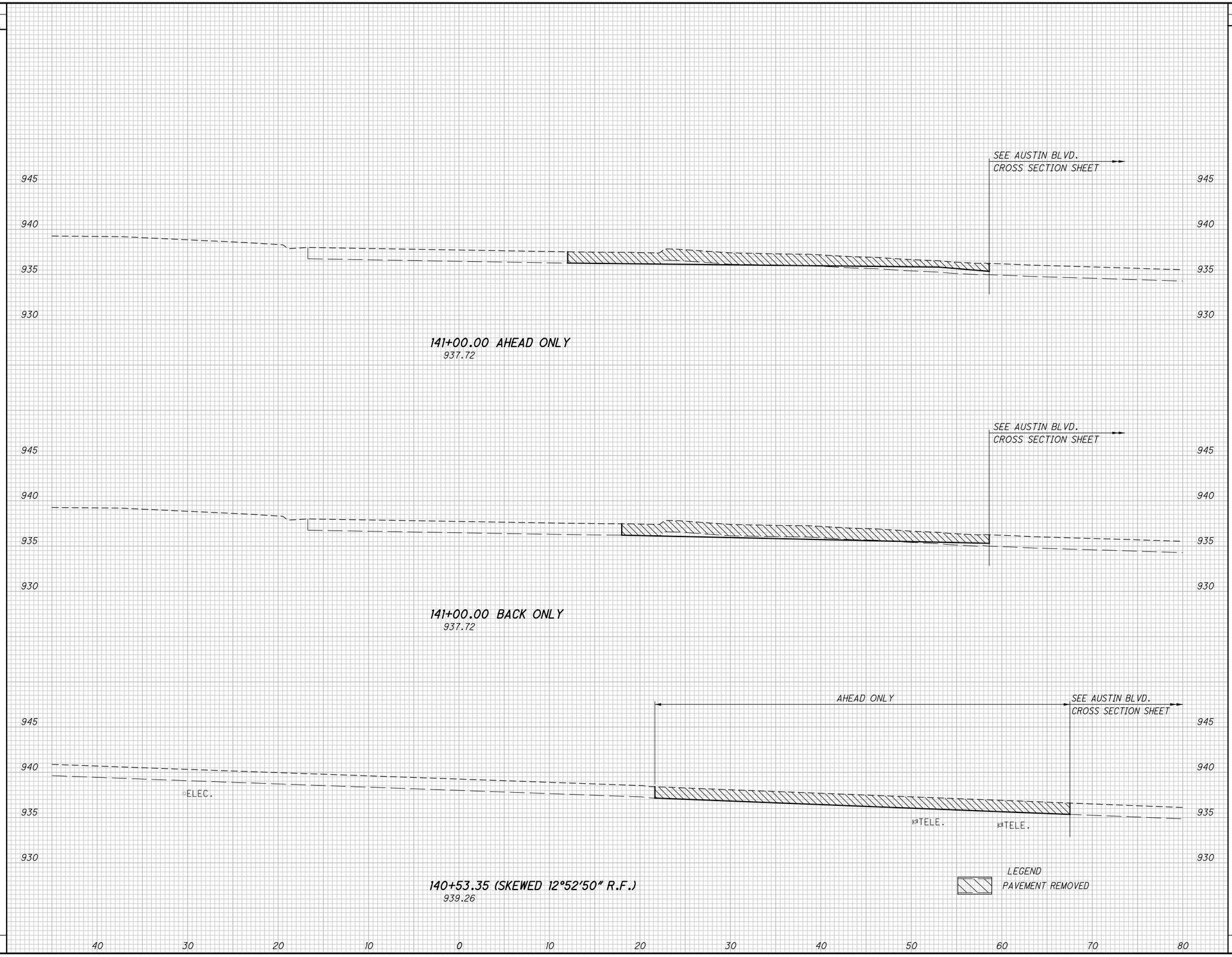
STA. 140+53.35 TO STA. 142+83.68

CALCULATED JMD

CHECKED MAG

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		54	0		
		54	0		
				96	0
		57	0		
				96	0

CALCULATED JMD | CHECKED MAG



CROSS SECTIONS - RAMP J
STA. 140+53.35 TO STA. 141+00.00

MOT-75-0.76

45
106

10/26/2018 7:35:33 AM jdelaney

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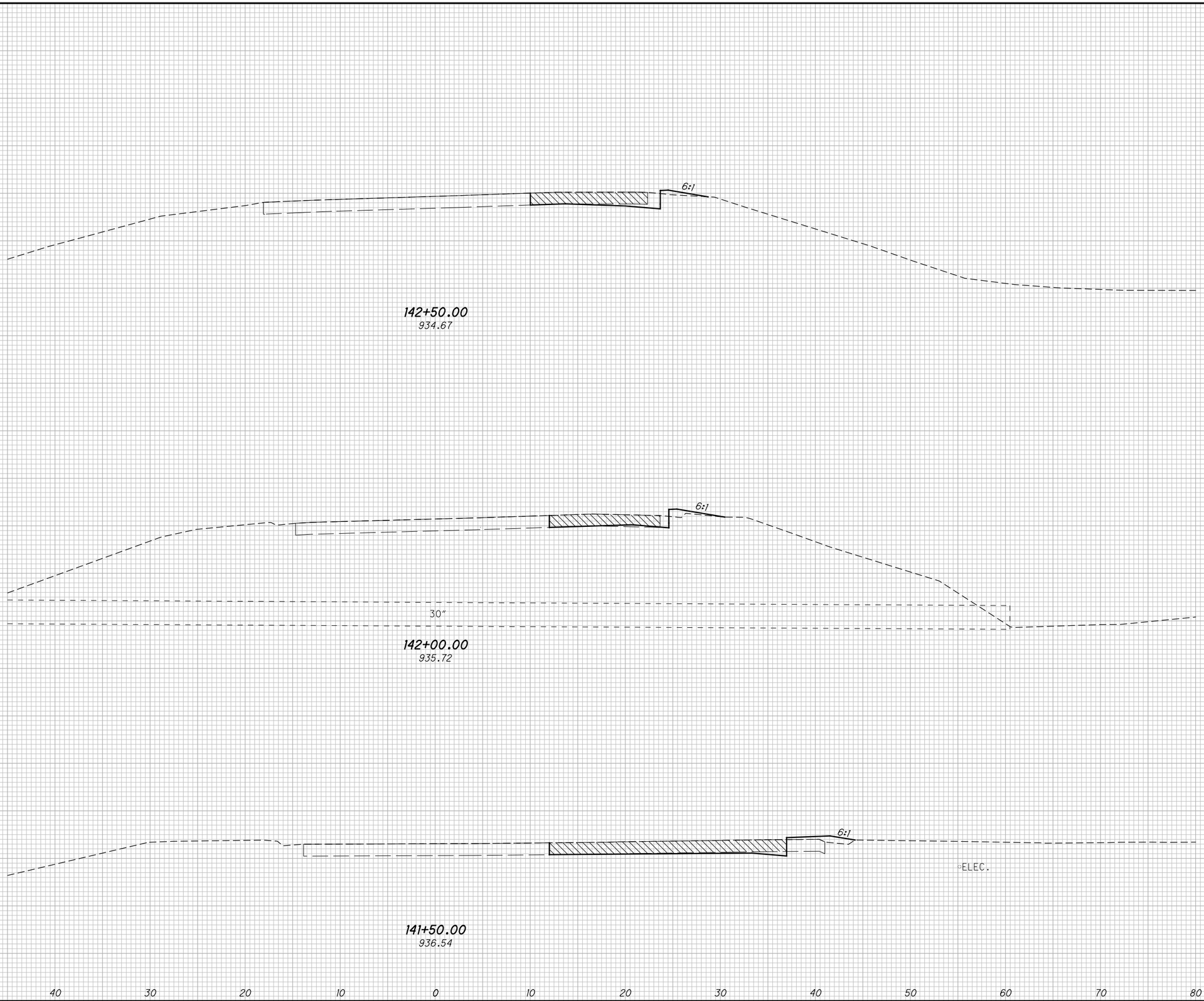
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	1		
		31	3
15	2		
		45	5
34	3		
		81	3
		157	11

CALCULATED JMD
CHECKED MAG

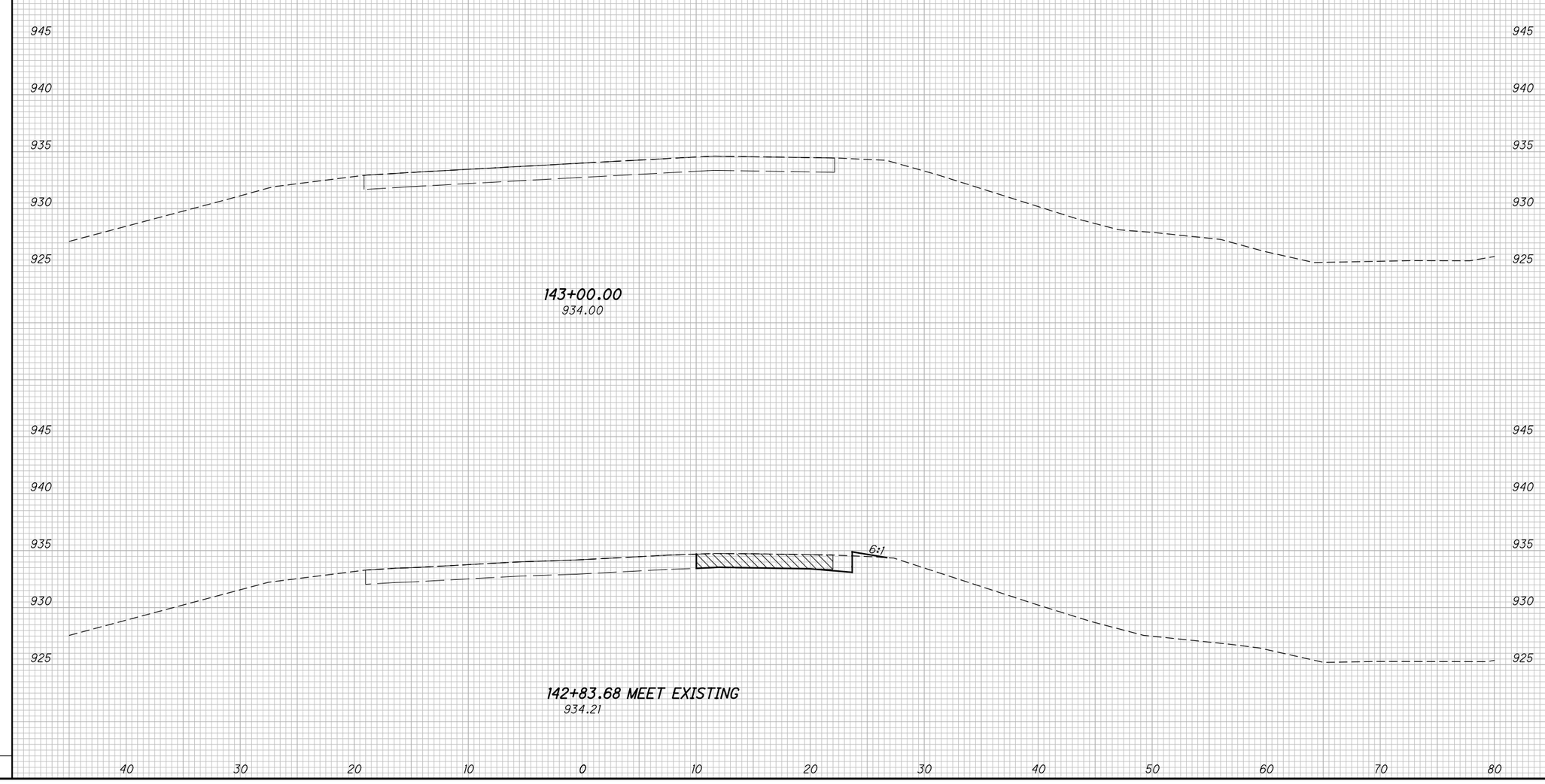
CROSS SECTIONS - RAMP J
STA. 141+50.00 TO STA. 142+50.00

MOT-75-0.76

46
106

SEEDING	
END WIDTH	SQ. YDS.

TOTALS CARRIED TO GENERAL SUMMARY	
ITEM 203 - EXCAVATION	275 CU YD
ITEM 203 - EMBANKMENT	12 CU YD
ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTES)	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
17	1		
		22	1
		22	1

CALCULATED JMD
CHECKED MAG

CROSS SECTIONS - RAMP J
STA. 142+83.67 TO STA. 143+00.00

MOT-75-0.76

47
106

℄ CONSTRUCTION RAMP J

PROPOSED EDGE LINE

SAW CUT

PROPOSED EDGE LINE

ODOT CURB AND GUTTER, TYPE 2

CB-3A
GRATE= 936.35

158+69.31
79.83' LT
RAMP, TYPE A1

PROPOSED EDGE LINE

SAW CUT

℄ CONSTRUCTION AUSTIN BLVD.

SAW CUT

ODOT CURB AND GUTTER, TYPE 2

AUSTIN BLVD.
STA. 159+03.65, 116.00' LT
R=50.00'
Δ=16°15'37"
T=7.14'
L=14.19'

AUSTIN BLVD.
STA. 159+10.65, 140.00' LT
R=75.00'
Δ=70°39'13"
T=53.16'
L=92.49'

RAMP J
STA. 142+83.68, 512.00', RT
AUSTIN BLVD.
STA. 163+35.04, 162.88' LT
R=500.00'
Δ=14°46'13"
T=64.81'
L=128.89'

(A) AUSTIN BLVD.
STA. 158+42.61, 55.72' LT.
R=64.00'
Δ=79°52'57"
T=53.59'
L=89.23'

(B) 937.09 (BACK OF WALK

(C) 936.70 (BACK OF WALK

(D) 936.28 (BACK OF WALK

(E) 935.66 (BACK OF WALK

(F) 934.43 (BACK OF WALK

NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DJB
CHECKED MAG

INTERSECTION DETAILS
AUSTIN BLVD. AT RAMP J

MOT-75-0.76

48
106

10/26/2018 7:35:36 AM jdelaney

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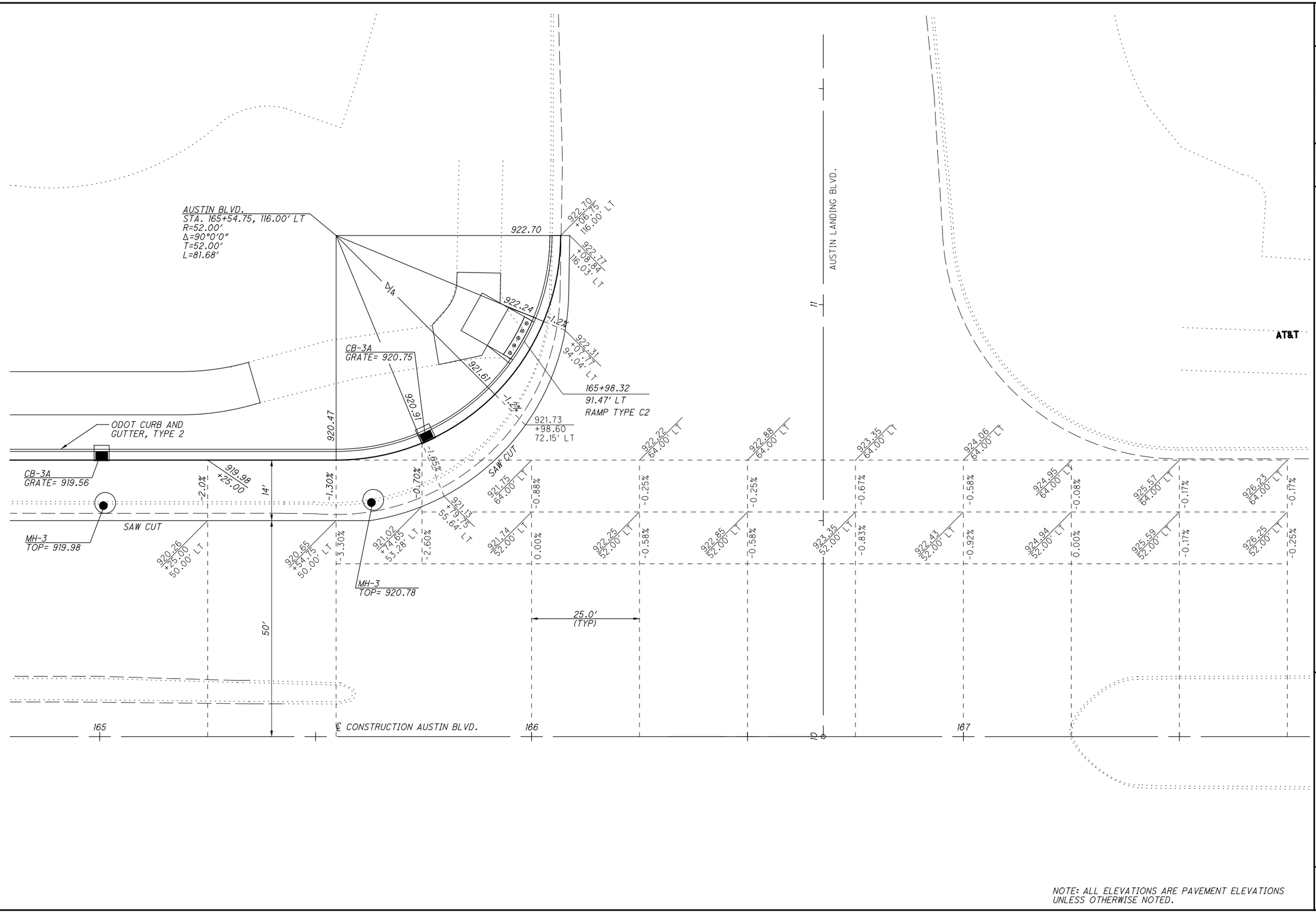


NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 5 10 20

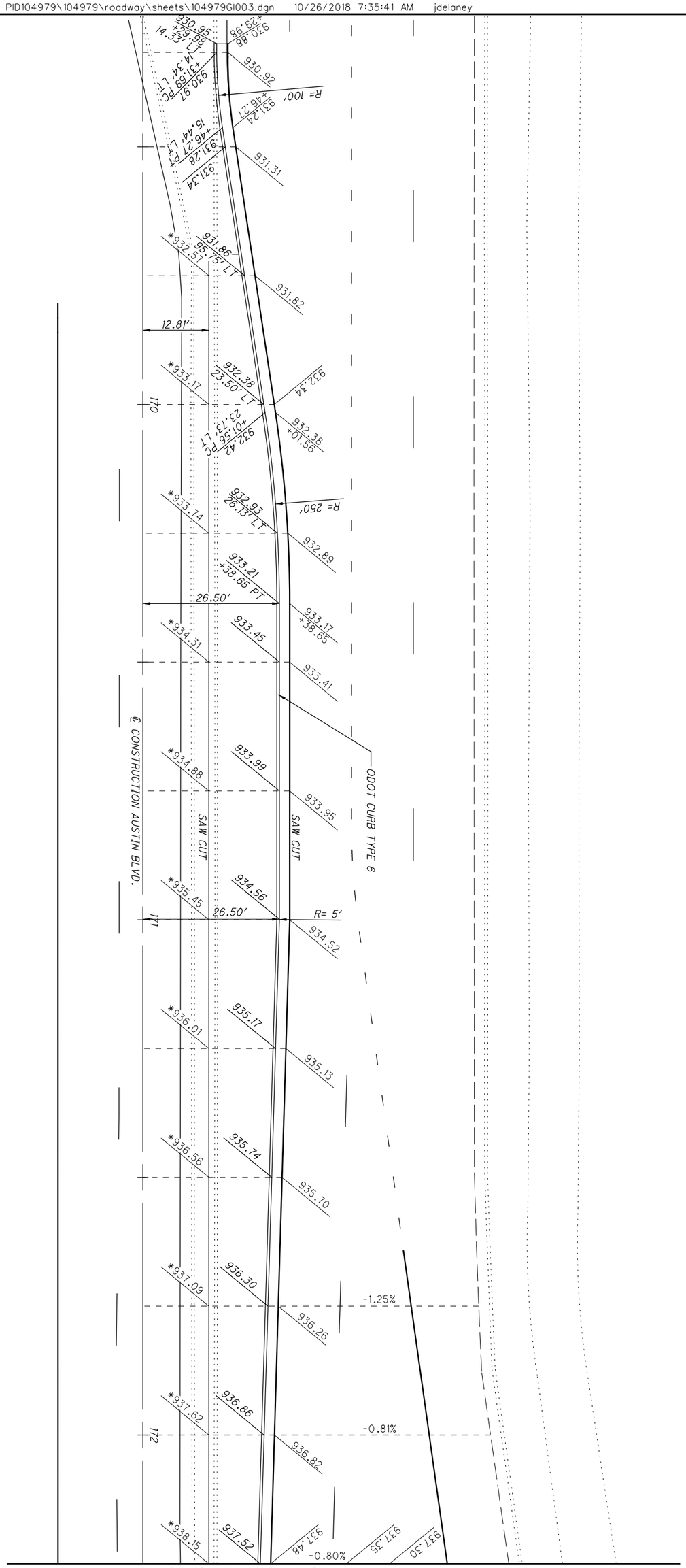
CALCULATED DJB
CHECKED MAG

INTERSECTION DETAILS
AUSTIN BLVD. AT AUSTIN LANDING BLVD.

MOT-75-0.76

49
106

Q:\ODOT_D7\0114101A.00 - MOT-75-076 PID104979\104979\roadway\sheets\104979GI002.dgn 10/26/2018 7:35:39 AM jdelaney



NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.

* EXISTING ELEVATIONS IN MEDIAN

MOT-75-0.76

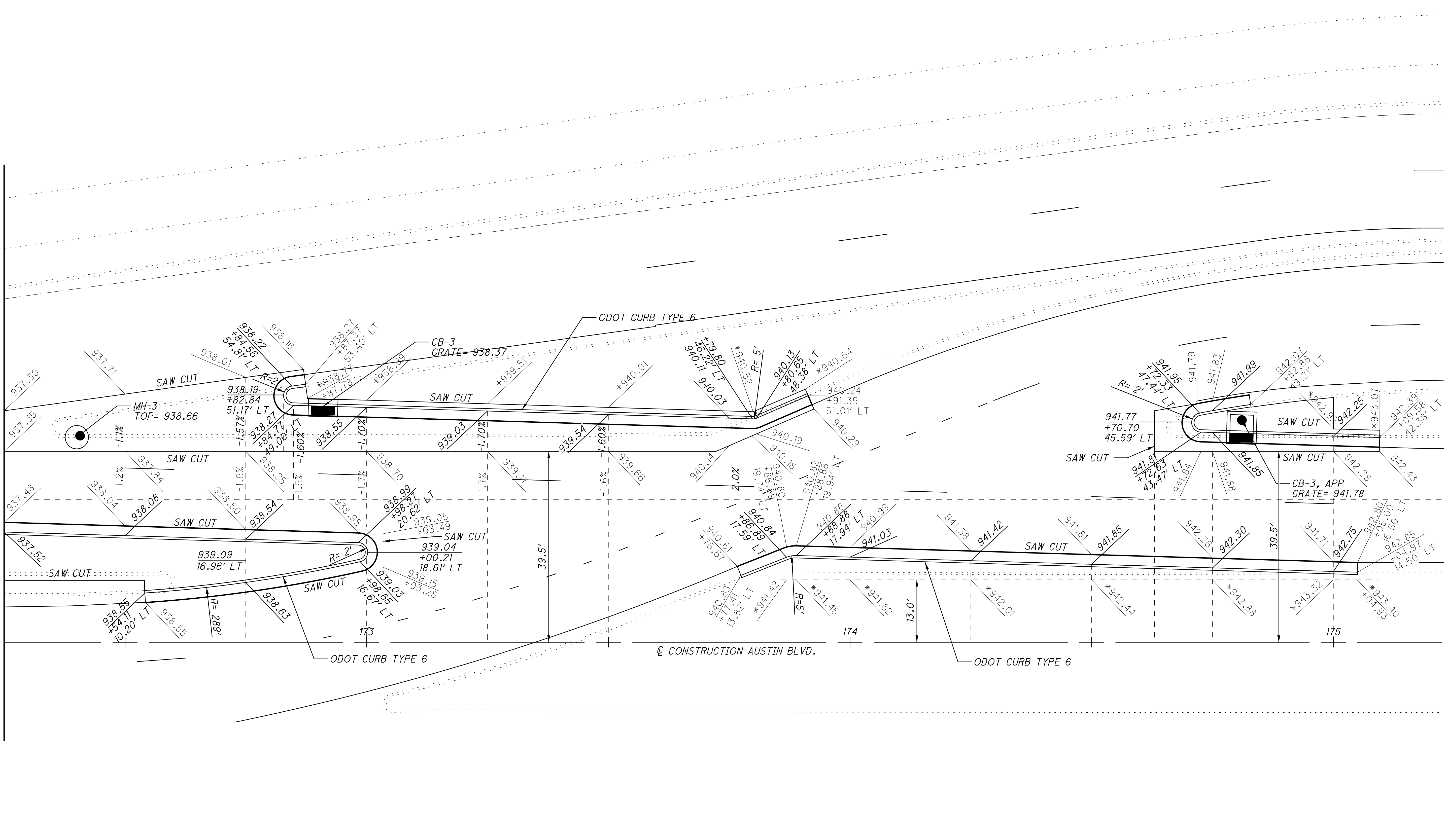
INTERSECTION DETAILS

AUSTIN BLVD. STA. 169+29.98 TO STA. 172+25.00

CALCULATED DJB
CHECKED MAG

0 5 10 20
HORIZONTAL SCALE IN FEET

N



NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS
UNLESS OTHERWISE NOTED.

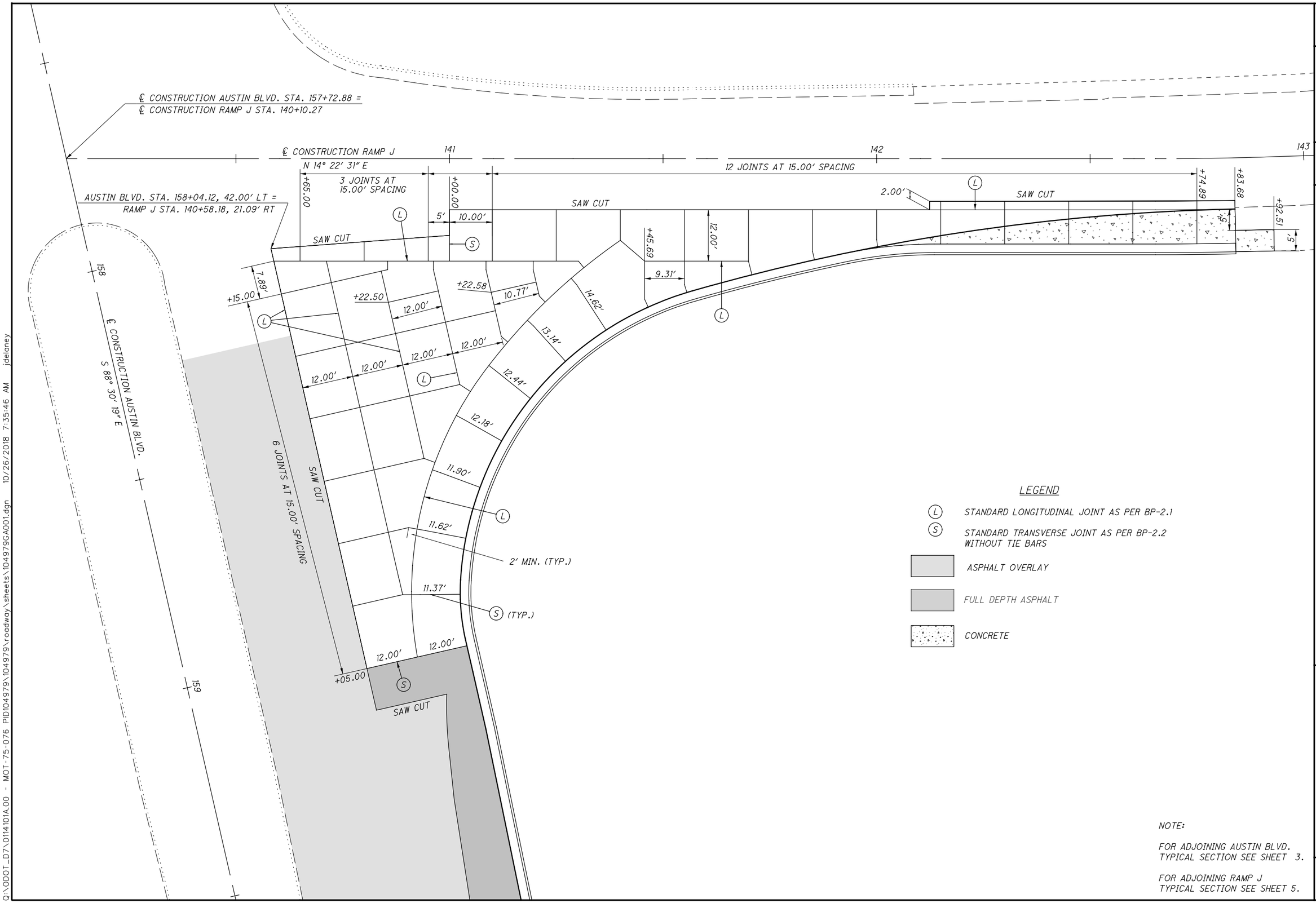
* EXISTING ELEVATIONS IN MEDIAN

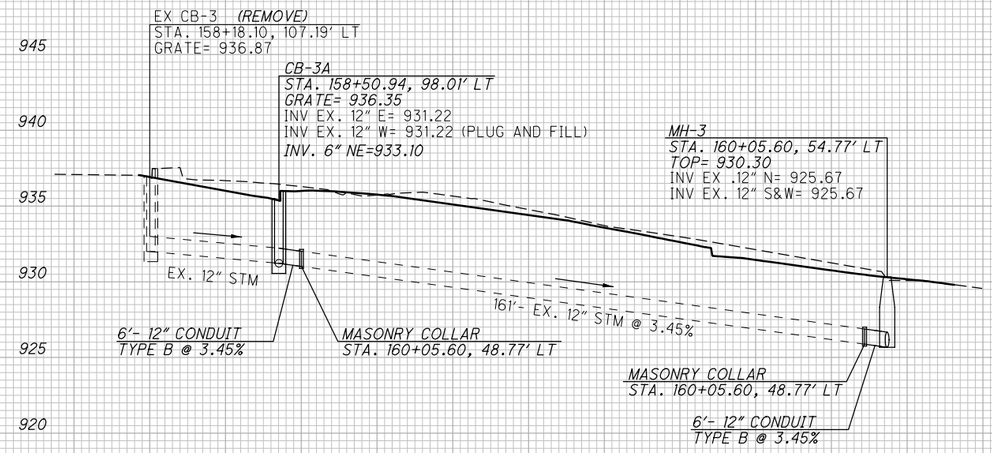
HORIZONTAL SCALE IN FEET (0 5 10 20)

CALCULATED DJB | CHECKED MAG

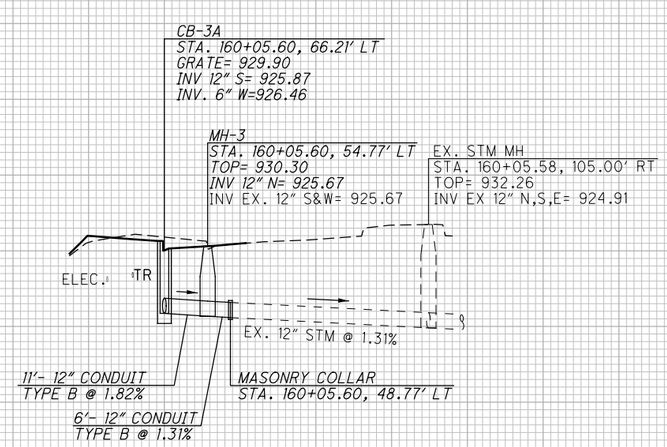
INTERSECTION DETAILS
AUSTIN BLVD. STA. 172+25.00 TO STA. 175+09.58

MOT-75-0.76

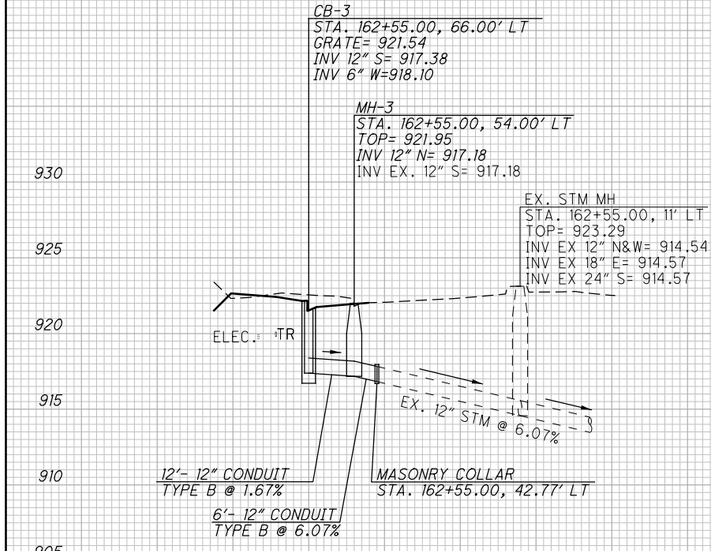




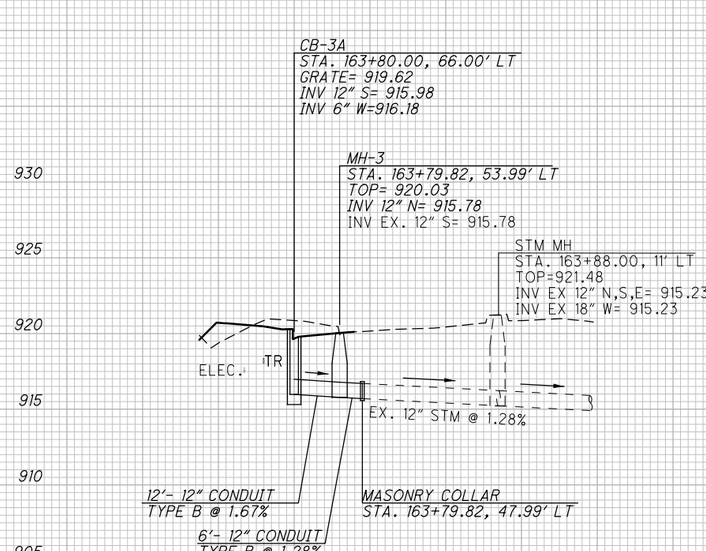
STA. 158+50.94 LT TO STA. 160+05.60 LT



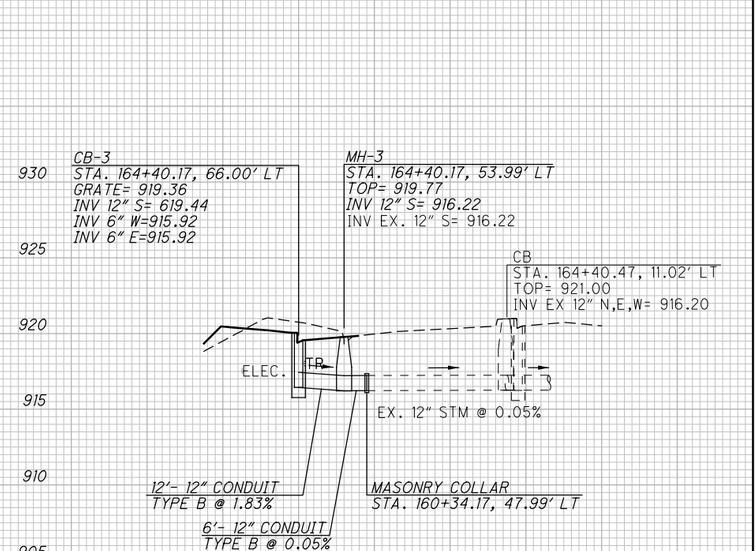
STA. 160+05.60 LT



STA. 162+55.00 LT



STA. 163+80.00 LT

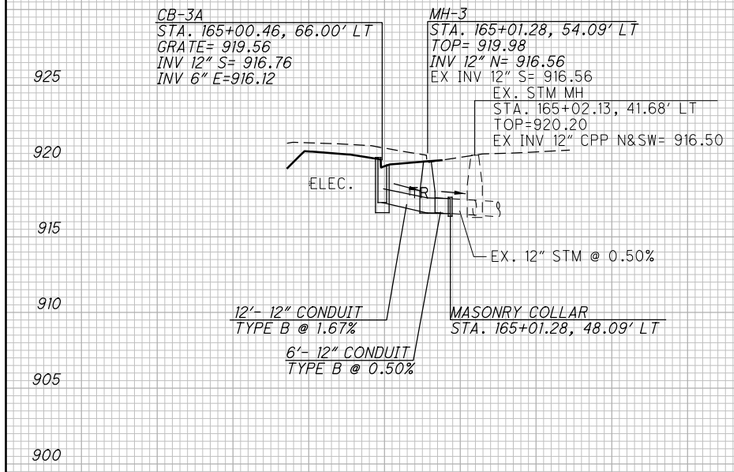


STA. 164+40.17 LT

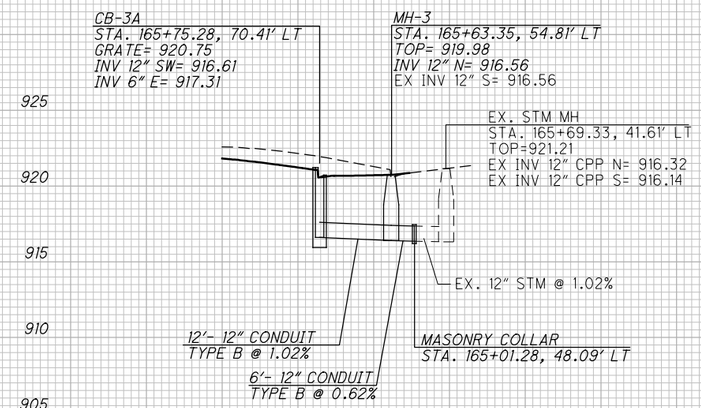
CALCULATED DJB
CHECKED MAG

STORM SEWER PROFILES
STA. 158+50.94 TO STA. 164+40.17

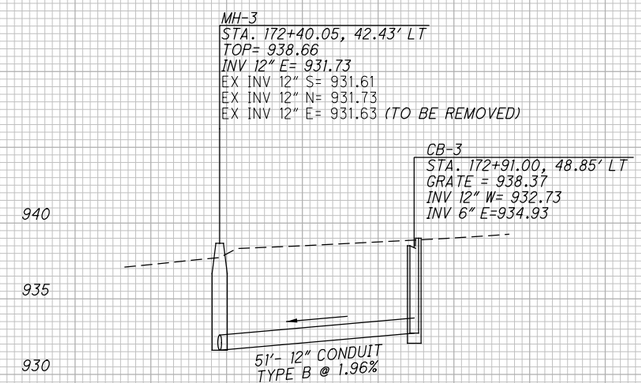
MOT-75-0.76



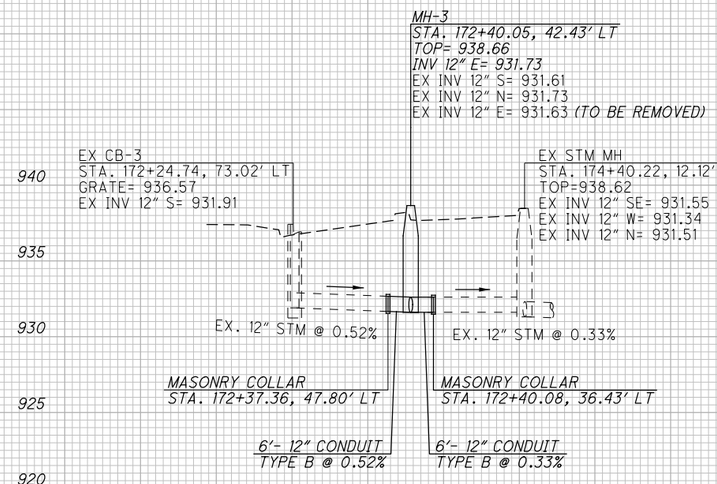
STA. 165+00.46



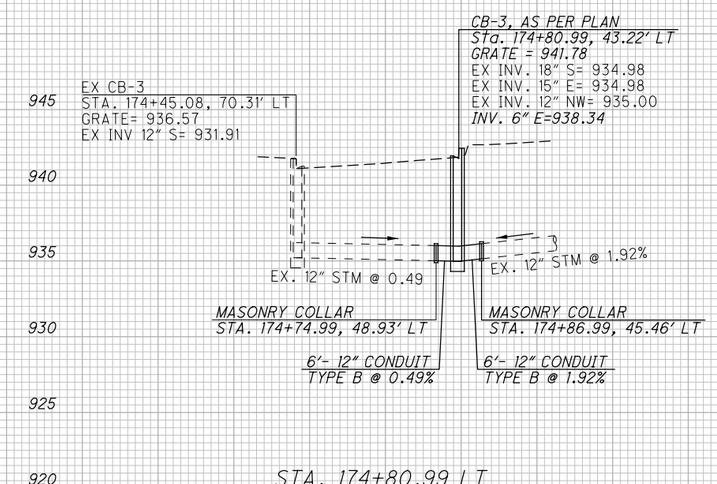
STA. 165+75.28



STA. 172+40.05 LT TO STA. 172+91.00 LT



STA. 172+40.05 LT



STA. 174+80.99 LT

CALCULATED DJB
CHECKED MAG

STORM SEWER PROFILES
STA. 165+00.46 TO STA. 174+80.99

MOT-75-0.76

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						56	57	58	59	60								TRAFFIC CONTROL	
										160				621	00100	160	EACH	RPM	
										160				621	54000	160	EACH	RAISED PAVEMENT MARKER REMOVED	
						4								625	32000	4	EACH	GROUND ROD	
						168								630	03100	168	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
						1								630	11208	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 13, AS PER PLAN	65
						1								630	11210	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14	
						1								630	11212	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14, AS PER PLAN	65
						2								630	74500	2	EACH	OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER	65
						1								630	75000	1	EACH	SIGN ATTACHMENT ASSEMBLY	
						15								630	79200	15	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM	
						1								630	79500	1	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
						285.22								630	80100	285.22	SF	SIGN, FLAT SHEET	
						132.5								630	80224	132.5	SF	SIGN, OVERHEAD EXTRUSHEET	
						4								630	84510	4	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
						6								630	84900	6	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						12								630	85100	12	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
						16								630	86002	16	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						17								630	87400	17	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
						1								630	89101	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN	65
						1								630	89706	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
						1								630	97700	1	EACH	SIGNING, MISC.: ANCHOR BOLTS	65
							0.44	0.28	0.04					644	00100	0.76	MILE	EDGE LINE, 4"	
							0.43	0.19						644	00200	0.62	MILE	LANE LINE, 4"	
							0.02	0.02						644	00300	0.04	MILE	CENTER LINE	
							758	694	1,508					644	00400	2,960	FT	CHANNELIZING LINE, 8"	
							96	109	39					644	00500	244	FT	STOP LINE	
							201							644	00600	201	FT	CROSSWALK LINE	
							16	11						644	00700	27	FT	TRANSVERSE/DIAGONAL LINE	
								200						644	00720	200	FT	CHEVRON MARKING	
							12	12	7					644	01300	31	EACH	LANE ARROW	
								2						644	01360	2	EACH	WRONG WAY ARROW	
							1,004	200	855					644	01500	2,059	FT	DOTTED LINE, 4"	
									450					644	30000	450	FT	REMOVAL OF PAVEMENT MARKING	
									57					644	30010	57	SF	REMOVAL OF PAVEMENT MARKING	
									1					644	30020	1	EACH	REMOVAL OF PAVEMENT MARKING	
							0.11							646	10000	0.11	MILE	EDGE LINE, 4"	
							0.05							646	10100	0.05	MILE	LANE LINE, 4"	
							30							646	10400	30	FT	STOP LINE	
							246							646	10500	246	FT	CROSSWALK LINE	
							90							646	10600	90	FT	TRANSVERSE/DIAGONAL LINE	
							51							646	10620	51	FT	CHEVRON MARKING	
							202							646	20502	202	FT	DOTTED LINE, 4"	

CALCULATED LAS
CHECKED PCG

TRAFFIC CONTROL GENERAL SUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION	SIDE	CODE	625 GROUND ROD	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 13, AS PER PLAN	630 SIGN ATTACHMENT ASSEMBLY	630 SIGN, FLAT SHEET	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN	630 OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14, AS PER PLAN	630 SIGN ATTACHMENT ASSEMBLY, MAST ARM	630 SIGNING, MISC.: ANCHOR BOLTS	630 SIGN, OVERHEAD EXTRUSHEET	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED	630 OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER	630 OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14	
					EACH	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH		EACH	EACH	EACH	EACH	EACH	SF	EACH	EACH	EACH	EACH	
M1	61	159+25	LT		1			1		1						1			1	56.00	1				
M2	62	163+50	RL		1				45.00	1					1		1			60.00	1				
M3	63	169+25	LT		1		1		52.47	1								4		16.50		1			
M4		NOT USED																							
M5	65	182+00	LT						45.00									3			9				
M6	65	186+75	LT						30.00									2			6		1		
SN1	61	142+15	RT			14						1	1												
SN2	61	141+62	RT								1		1												
SN3	61	158+83	LT			14						1	1												
SN4	61	158+59	LT								1		1												
SN5	61	159+10	LT	R10-11C-30		14			7.50																
SN6	61	159+40	LT	R3-H8DE-54		28			11.25		1		2												
SN7	61	162+03	LT	R3-H8DE-54		28			11.25		1		2												
SN8	62	165+30	LT			14						2	1												
SN9	62	165+54	LT	R3-4-36 R4-7-30		14			16.50																
SN10	63	172+52	LT			14						2	1												
SN11	64	174+76	LT			14						2	1												
SN12	63	170+25	LT								1		2												
SN13	61	158+90	LT			14						4	1												
SN-101	67	34+63	RT	M2-H10-60	1				15.00	1								1				1	1		
				M2-H10-60					15.00									1							
				R3-5A-30					7.50									1							
				R3-5A-30					7.50									1							
				R3-5R-30					7.50									1							
				D3-2-66					13.75									1							
-	67	35+00	RT	-							1		2												
TOTALS CARRIED TO GENERAL SUMMARY					4	168	1	1	285.22	4	6	12	16		1	1	1	15	1	132.50	17	1	2	1	

CALCULATED LAS
CHECKED PCG

TRAFFIC CONTROL SUBSUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			644 EDGE LINE, 4" (WHITE)	644 EDGE LINE, 4" (YELLOW)	644 LANE LINE, 4"	644 CENTER LINE(DOUBLE SOLID)	644 CHANNELIZING LINE, 8"	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE (YELLOW)	644 LANE ARROW	644 DOTTED LINE, 4"			646 EDGE LINE, 4" (WHITE)	646 EDGE LINE, 4" (YELLOW)	646 LANE LINE, 4"	646 STOP LINE	646 CROSSWALK LINE	646 TRANSVERSE/DIAGONAL LINE (WHITE)	646 CHEVRON MARKING	646 DOTTED LINE, 4"	
			TO		MILE	MILE	MILE	MILE	FT	FT	FT	FT	EACH	FT			MILE	MILE	MILE	FT	FT	FT	FT	FT	
		RAMP																							
L8	61	141+54		144+13															0.05						
Y7	61	157+48		142+08														0.05							
		AUSTIN BLVD																							
O1	61	156+83		142+54										326											
E1	61	158+05		158+11													0.01								
X1	61	157+64		158+72																	198				
E2	61	142+84		159+03													0.05								
O2	61	142+54		158+55																				202	
T1	61	142+84		159+03																		90			
E3		NOT USED																							
H1	61	158+05		158+50																			51		
S1	61	158+29								24															
C2	61	158+11		158+50																	48				
S2	61	158+50																		30					
C1	61-62	158+05		163+69					564																
A1	61	158+85											1												
A2	61	158+85											1												
L1	61-62	158+29		165+63			0.14																		
L2	61-62	158+55		165+63			0.14																		
Y1	61-62	158+04		165+63		0.15																			
A3	61	160+61											1												
A4	61	160+61											1												
A5	61	162+38											1												
A6	61	162+38											1												
A7	62	163+26											1												
A8	62	163+26											1												
O3	62	163+69		166+18										270											
X3	62	165+93		166+48							99														
X2	62	167+35		167+50							102														
S3	62	167+56								48															
L3	62-63	167+56		169+30			0.04																		
L4	62-63	167+56		170+90			0.07																		
O4	62-63	167+56		171+64										408											
Y2	62-63	167+56		172+98		0.11																			
L6	63-64	171+01		177+38			0.04																		
C3	63-64	171+64		173+58					194																
D1	63	172+37		172+85				0.01																	
D2	63	172+37		172+85				0.01																	
N1	63	172+37		172+85								16													
S5	63	172+85								24															
Y4	63-64	172+85		177+00		0.08																			
E5	63-64	172+85		173+81	0.02																				
Y3	63	168+97		172+98		0.08																			
A9	63	170+19											1												
A10	63	170+19											1												
A11	63	170+85											1												
A12	63	170+85											1												
					0.02	0.42											0.06	0.05							
TOTALS CARRIED TO GENERAL SUMMARY					0.44		0.43	0.02	758	96	201	16	12	1004			0.11		0.05	30	246	90	51	202	

CALCULATED LAS
CHECKED PCG

TRAFFIC CONTROL SUBSUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			644 EDGE LINE, 4"(WHITE) MILE	644 EDGE LINE, 4"(YELLOW) MILE	644 LANE LINE, 4" MILE	644 CENTER LINE(DOUBLE SOLID) MILE	644 CHANNELIZING LINE, 8" FT	644 STOP LINE FT		644 TRANSVERSE/DIAGONAL LINE(YELLOW) FT	644 CHEVRON MARKING FT	644 LANE ARROW EACH	644 WRONG WAY ARROW EACH	644 DOTTED LINE, 4" FT									
			TO																						
L5	63	170+13		172+99			0.06																		
C4	63	169+81		172+72					291																
A13	63	171+53												1											
A14	63	171+53												1											
A15	63	172+16												1											
A16	63	172+16												1											
A17	63	172+80												1											
A18	63	172+80												1											
S4	63	172+99								25															
N2	63	172+98		173+25								11													
D3	63	172+98		173+25				0.01																	
D4	63	172+98		173+25				0.01																	
O5	63-64	172+98		174+30													142								
E4	63-64	172+72		173+87	0.03																				
L7	64	173+58		177+00			0.07																		
Y5	64	173+81		177+00		0.07																			
L8	64	174+30		177+00			0.06																		
E6	64	174+72		177+00	0.05																				
D5	64	174+43		174+72													29								
D6	64	174+43		174+72													29								
A19	64	175+13												1											
A20	64	175+13												1											
E7	64	174+72		177+38	0.06																				
Y6	64	173+87		177+38		0.07																			
W1	64	174+72														1									
W2	64	174+72														1									
S6	64	174+57								24															
		AUSTIN LANDING																							
S7	62	11+07								36															
C7	62	11+07		11+28																					
S8	62	11+28								24															
A21	62	11+38												1											
A22	62	11+38												1											
C5	62, 64	11+07		13+66					259																
C6	62, 64	11+07		12+51					144																
H2	62, 64	11+07		13+66									200												
A23	62	12+25												1											
A24	62	12+25												1											
					0.14	0.14																			
TOTALS CARRIED TO GENERAL SUMMARY					0.28		0.19	0.02	694	109		11	200	12	2	200									

CALCULATED LAS
CHECKED PCG

TRAFFIC CONTROL SUBSUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			644 EDGE LINE, 4"(WHITE)			644 CHANNELIZING LINE, 8"	644 STOP LINE					644 LANE ARROW		644 DOTTED LINE, 4"		644 REMOVAL OF PAVEMENT MARKING	644 REMOVAL OF PAVEMENT MARKING	644 REMOVAL OF PAVEMENT MARKING					
			TO		MILE			FT	FT					EACH		FT		FT	SF	EACH					
C-101	66	29+31.00		38+26.00				895																	
R-101	66	30+86.00		31+82.00														97							
R-102	66	30+98.00		38+04.00														261							
R-103	66	31+52.00																		1					
A-101	67	32+40.00												1											
A-102	67	33+28.00												1											
A-103	67	34+16.00												1											
A-104	67	35+04.00												1											
A-105	67	35+92.00												1											
C-102	67	31+82.00		37+95.00				613																	
A-106	68	36+80.00												1											
A-107	68	37+68.00												1											
S-101	68	37+95.00							25																
S-102	68	41+10.00							14																
O-101	68	37+95.00		177+38.00												275									
O-102	68	37+98.00		40+90.00												292									
O-103	68	38+26.00		41+14.00												288									
E-101	68	39+95.00		40+09.00	0.01																				
E-102	68	40+38.00		40+80.00	0.01																				
E-103	68	177+78.00		41+29.00	0.02																				
R-104	68	37+98.00		38+04.00															57						
R-105	68	177+68.00		178+14.00														20							
R-106	68	39+95.00		40+09.00														14							
R-107	68	40+38.00		40+80.00														42							
R-108	68	41+13.00		41+29.00														16							
TOTALS CARRIED TO GENERAL SUMMARY					0.04			1508	39					7		855		450	57	1					

CALCULATED LAS
CHECKED PCG

TRAFFIC CONTROL SUBSUMMARY

MOT-75-0.76

LOCATION SUB-SUMMARY

DETAIL	TC-65.10	DETAIL	TC-65.11	DETAIL	TC-65.11
1	EDGE LINE	5	ENTRANCE RAMP	10	APPROACH W/ LEFT-TURN LANE
2	CHANNELIZING LINE	6	EXIT RAMP	11	THROUGH APPROACH
3	LANE LINE	7	4-LANE DIVIDED TO 2-LANE TRANSITION	12	STOP APPROACH
4	CENTER LINE	8	4-LANE DIVIDED TO 2-LANE TRANSITION	13	TWO-WAY LEFT-TURN LANE
		9	MULTI-LANE DIVIDED HIGHWAY	14	ONE-LANE BRIDGE
				15	HORIZONTAL CURVE

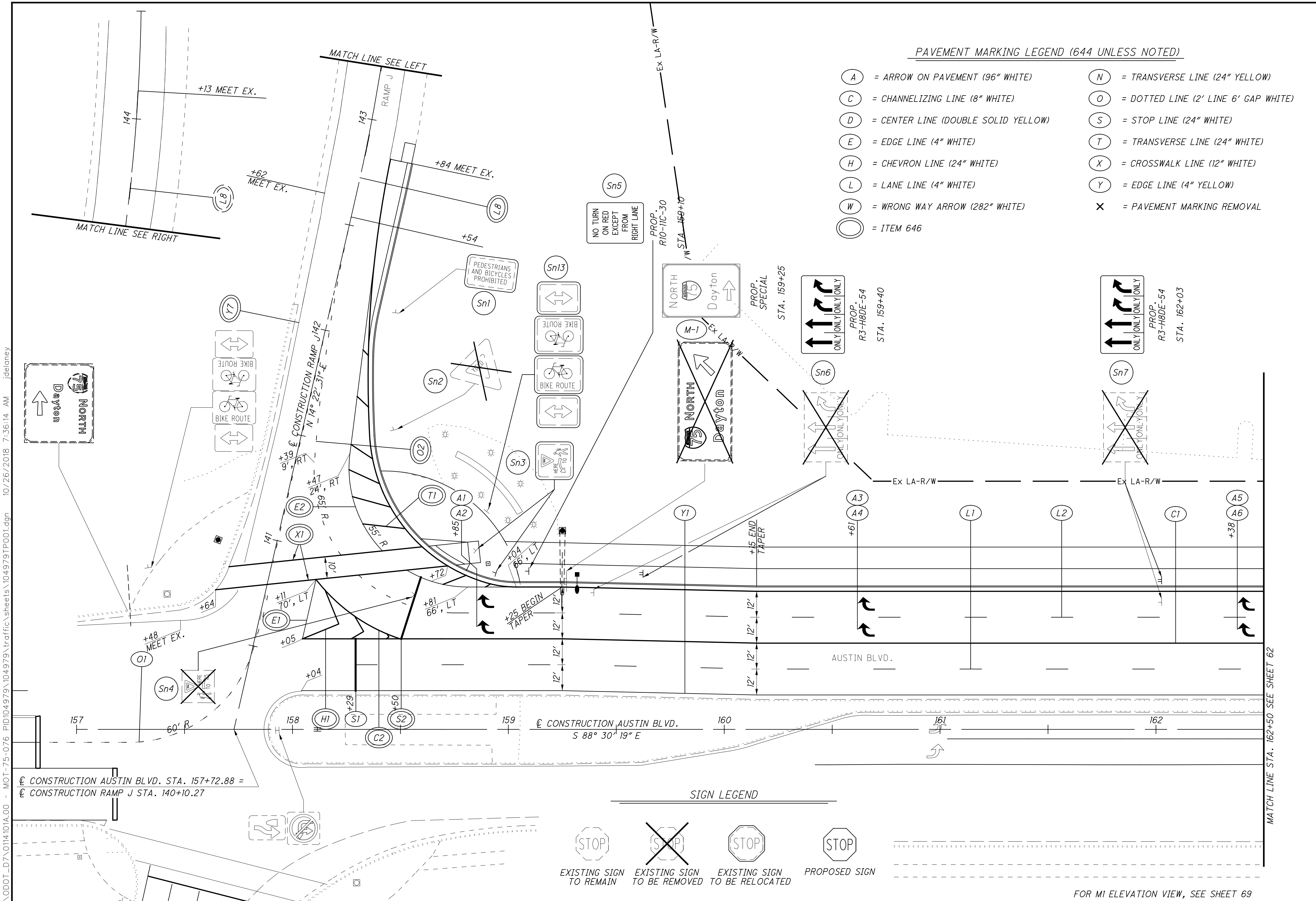
QUANTITIES CARRED TO THE GENERAL SUMMARY

LOCATION	SLM SECTION		SCD DETAIL REF. NO.	621					621 RPM					REMARKS
				DISTANCE	MAXIMUM SPACING		RAISED PAVEMENT MARKER REMOVED		ONE-WAY		TWO-WAY			
	FROM	TO							WHITE	YELLOW	YELLOW RED	YELLOW YELLOW	WHITE RED	
				FEET	FEET		EACH		EACH	EACH	EACH	EACH	EACH	
RAMP														
L8	141+54	144+13	3	259	40		8						8	
Y7	157+48	142+08	1	227	80		4				4			
AUSTIN BLVD														
C2	158+11	158+50	2	48	40		3						3	
C1	158+05	163+69	2	564	40		15						15	
L1	158+29	165+63	3	734	80		11						11	
L2	158+55	165+63	3	708	80		10						10	
L3	167+56	169+30	3	174	80		4						4	
L4	167+56	170+90	3	334	80		6						6	
L6	171+01	177+38	3	637	80		9						9	
C3	171+64	173+58	2	194	40		6						6	
D1	172+37	172+85	4	48	80		3					3		
D2	172+37	172+85	4	48	80		3					3		
L5	170+13	172+99	3	286	80		5						5	
C4	169+81	172+72	2	291	40		9						9	
D3	172+98	173+25	4	27	80		3					3		
D4	172+98	173+25	4	27	80		3					3		
L7	173+58	177+00	3	342	80		6						6	
L8	174+30	177+00	3	270	80		5						5	
D5	174+43	174+72	4	29	80		3					3		
D6	174+43	174+72	4	29	80		3					3		
SR 741														
C-101	29+31	38+26	2	895	40		24						24	
C-102	31+82	37+95	2	613	40		17						17	
TOTAL CARRIED TO GENERAL SUMMARY							160		0	0	4	18	138	
									160					

CALCULATED LAS CHECKED PCG

TRAFFIC CONTROL SUBSUMMARY

MOT-75-0.76



PAVEMENT MARKING LEGEND (644 UNLESS NOTED)

(A) = ARROW ON PAVEMENT (96" WHITE)	(N) = TRANSVERSE LINE (24" YELLOW)
(C) = CHANNELIZING LINE (8" WHITE)	(O) = DOTTED LINE (2' LINE 6' GAP WHITE)
(D) = CENTER LINE (DOUBLE SOLID YELLOW)	(S) = STOP LINE (24" WHITE)
(E) = EDGE LINE (4" WHITE)	(T) = TRANSVERSE LINE (24" WHITE)
(H) = CHEVRON LINE (24" WHITE)	(X) = CROSSWALK LINE (12" WHITE)
(L) = LANE LINE (4" WHITE)	(Y) = EDGE LINE (4" YELLOW)
(W) = WRONG WAY ARROW (282" WHITE)	× = PAVEMENT MARKING REMOVAL
( ) = ITEM 646	

SIGN LEGEND

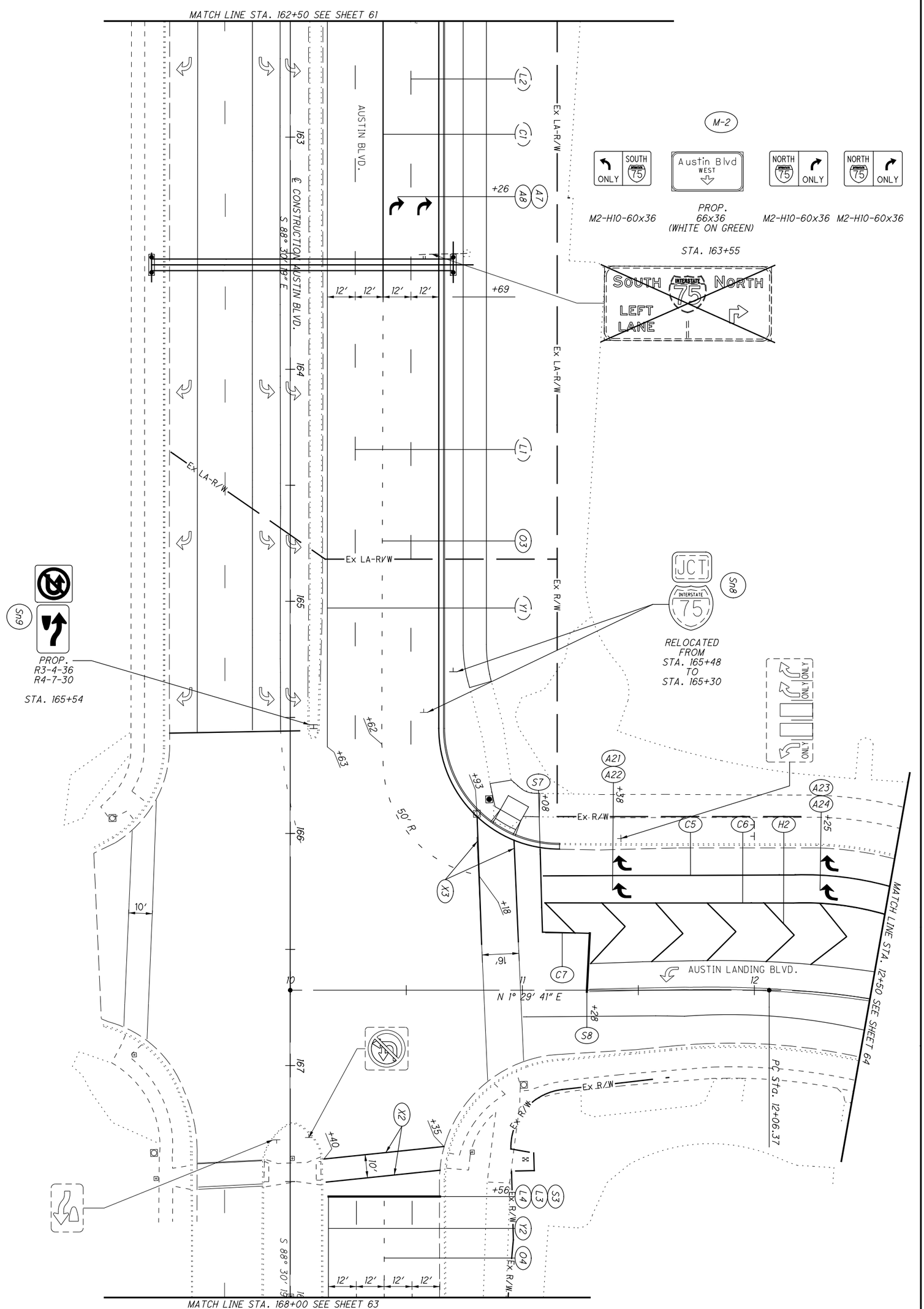
FOR M1 ELEVATION VIEW, SEE SHEET 69

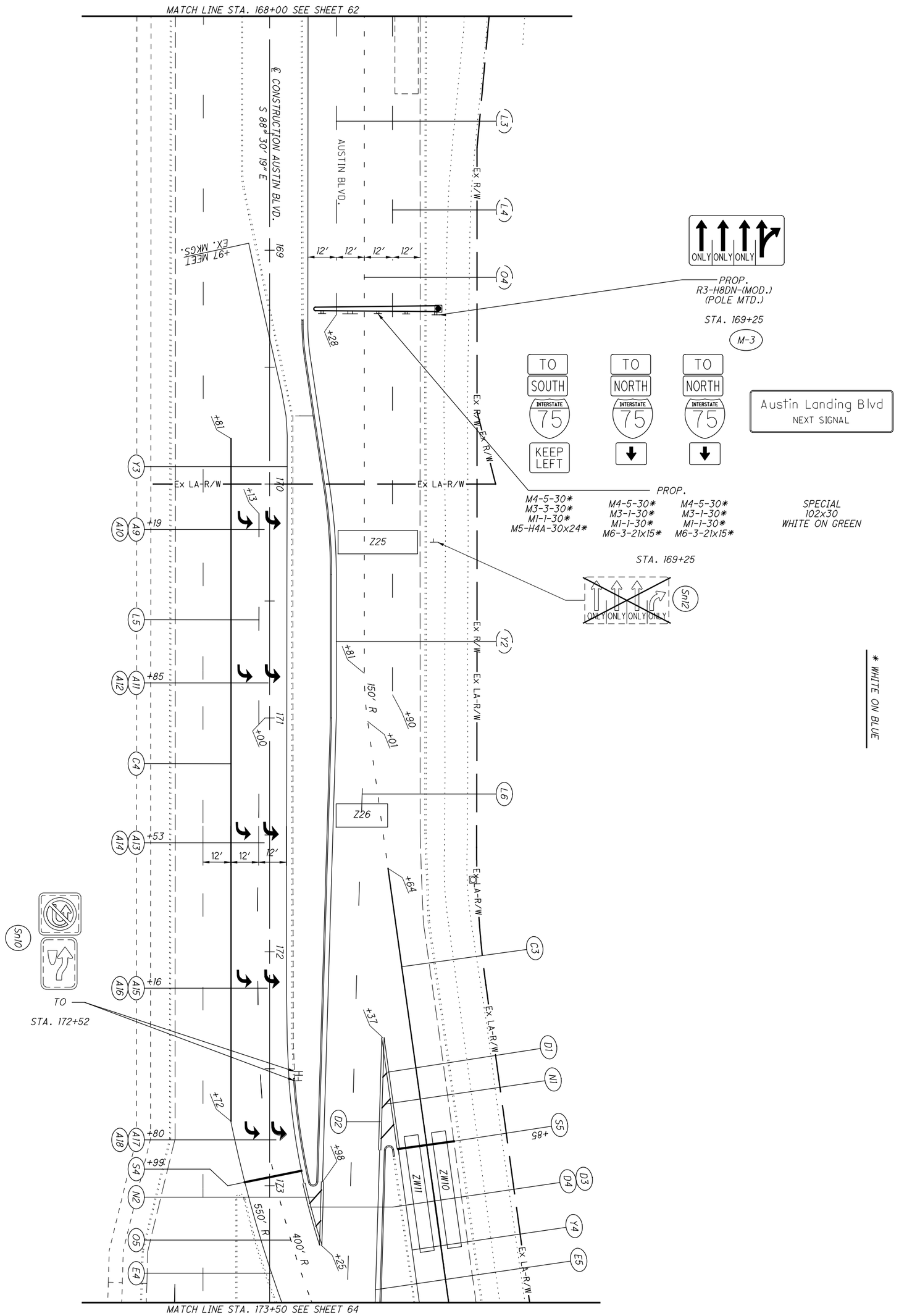
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED LAS CHECKED PCG

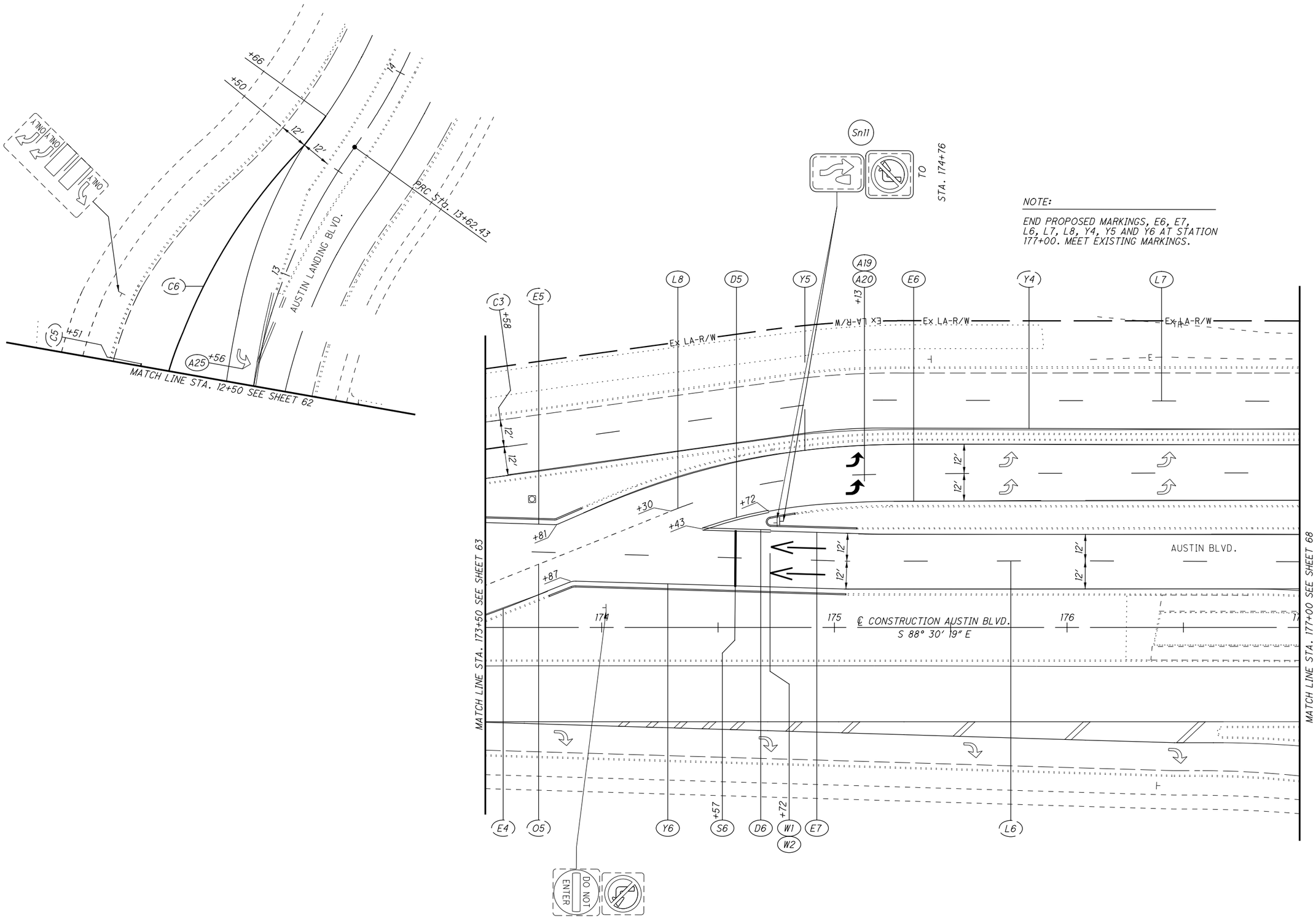
TRAFFIC CONTROL PLAN RAMP J AND AUSTIN BLVD

MOT-75-0.76


MATCH LINE STA. 162+50 SEE SHEET 61
AUSTIN BLVD.
℄ CONSTRUCTION AUSTIN BLVD.
S 88° 30' 19" E
Ex LA-R/W
Ex R/W
M-2
SOUTH 75 ONLY
Austin Blvd WEST
NORTH 75 ONLY
NORTH 75 ONLY
M2-H10-60x36
PROP. 66x36 (WHITE ON GREEN)
M2-H10-60x36
M2-H10-60x36
STA. 163+55
SOUTH INTERSTATE 75 NORTH
LEFT LANE
JCT INTERSTATE 75
RELOCATED FROM STA. 165+48 TO STA. 165+30
PROP. R3-4-36 R4-7-30
STA. 165+54
50' R
AUSTIN LANDING BLVD.
N 1° 29' 41" E
PC Sta. 12+06.37
MATCH LINE STA. 12+50 SEE SHEET 64
FOR SIGNING AND MARKING LEGENDS, SEE SHEET 61
FOR M2 ELEVATION VIEW, SEE SHEET 70
MATCH LINE STA. 168+00 SEE SHEET 63



FOR SIGNING AND MARKING LEGENDS, SEE SHEET 61
FOR M3 ELEVATION VIEW, SEE SHEET 69



TRAFFIC CONTROL PLAN
AUSTIN BLVD

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED LAS
CHECKED PCG

MOT-75-0.76

64
106

TRAFFIC CONTROL GENERAL NOTES

630, OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN <X>, AS PER PLAN

THE EXTERIOR OF OVERHEAD SIGN SUPPORTS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM BID, COMPLETE.

630, REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 630:

--PLUG UNUSED COUPLINGS IN THE EXISTING SUPPORT WITH GALVANIZED CAST IRON PLUGS. PLUG OTHER UNUSED OPENINGS WITH PLASTIC PLUGS.

--REPAINT SCRATCHES ON THE SUPPORT TO MATCH THE EXISTING FINISH. PAINT CAST IRON PLUGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 630 REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN".

630, SIGNING, MISC.: ANCHOR BOLTS

IN ADDITION TO THE REQUIREMENTS OF CMS 630:

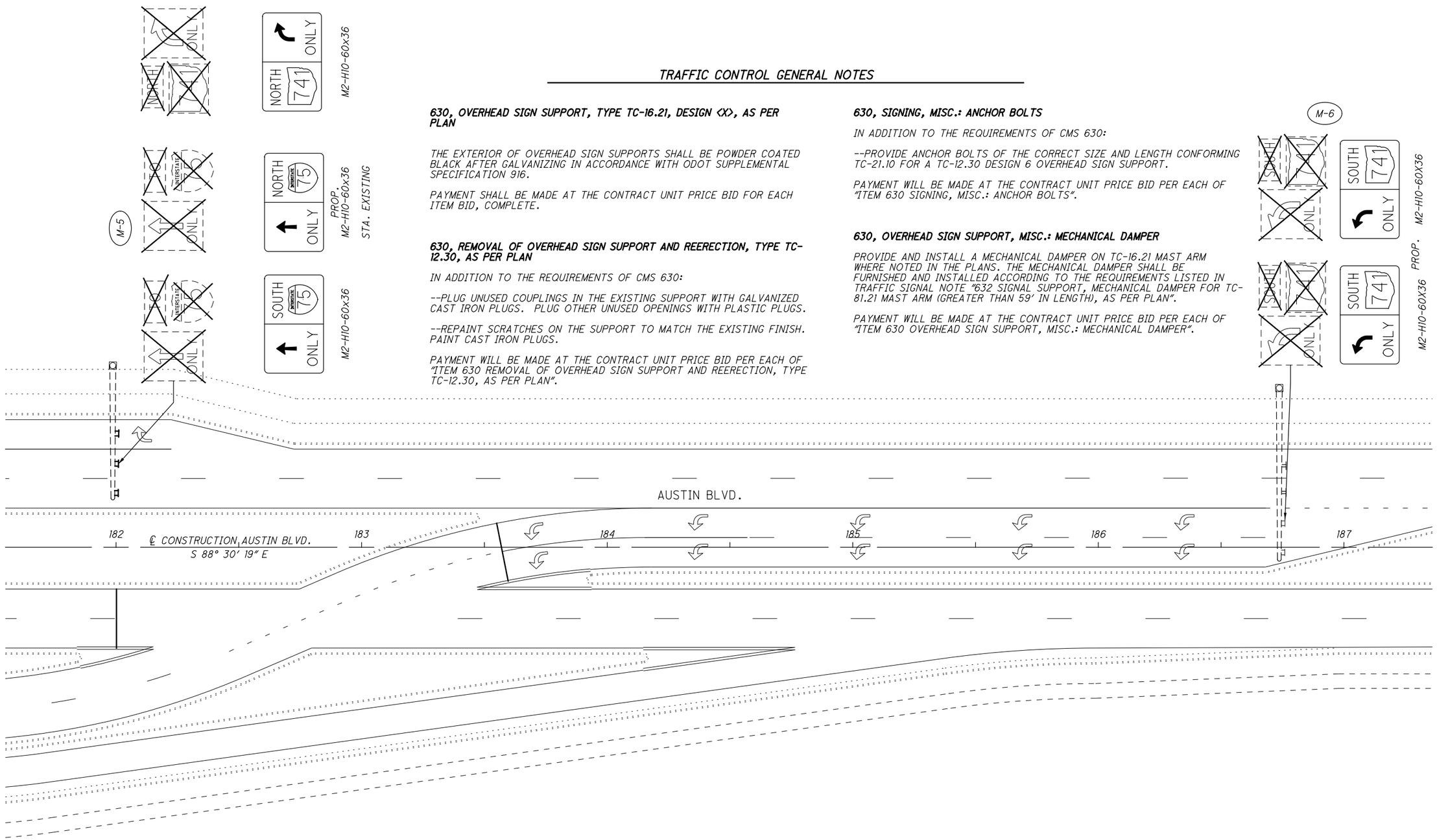
--PROVIDE ANCHOR BOLTS OF THE CORRECT SIZE AND LENGTH CONFORMING TC-21.10 FOR A TC-12.30 DESIGN 6 OVERHEAD SIGN SUPPORT.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 630 SIGNING, MISC.: ANCHOR BOLTS".

630, OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER

PROVIDE AND INSTALL A MECHANICAL DAMPER ON TC-16.21 MAST ARM WHERE NOTED IN THE PLANS. THE MECHANICAL DAMPER SHALL BE FURNISHED AND INSTALLED ACCORDING TO THE REQUIREMENTS LISTED IN TRAFFIC SIGNAL NOTE "632 SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), AS PER PLAN".

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 630 OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER".



FOR SIGNING AND MARKING LEGENDS, SEE SHEET 61

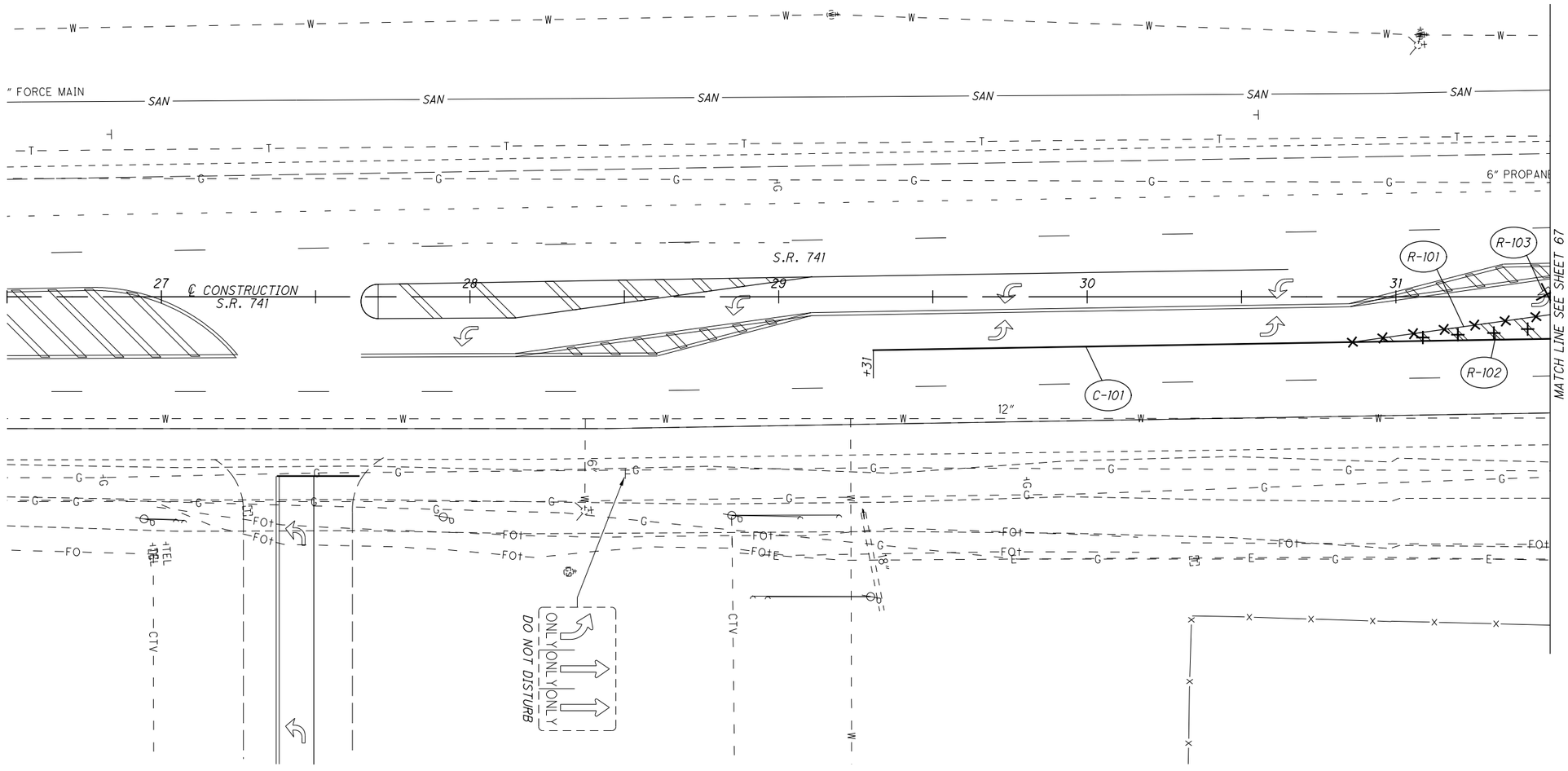
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED LAS CHECKED PCG

TRAFFIC CONTROL PLAN/GENERAL NOTES
AUSTIN BLVD.

MOT-75-0.76

Q:\ODOT_D7\0114101A.00 - MOT-75-076 PID104979\104979\traffic\sheets\104979TP005.dgn 10/26/2018 7:36:47 AM jdelaney



NOTES:

1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.
2. PROPOSED LONGITUDINAL MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.
3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS
4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED NDE
CHECKED ADL

TRAFFIC CONTROL PLAN
S.R. 741

MOT-75-0.76

66
106

MATCH LINE SEE SHEET 66

MATCH LINE SEE SHEET 68

S.R. 741

℄ CONSTRUCTION S.R. 741

EX. DUKE GAS

BP-8" DAYTON-BROMLEY PIPELINE

BP GAS PIPELINE
(CONTACT BP PRIOR
TO WORKING IN AREA)

EX. CENTURY LINK AND
CHARTER FIBER OPTIC

EX. CENTURY LINK AND CHARTER FIBER OPTIC
(TO BE RELOCATED PRIOR TO BEGINNING
WORK TO AVOID DELAY OF PROJECT)

R-103 R-101 A-101 C-102 A-102 C-101 R-102 A-103 A-104 A-105

+82 +40± +28± +16± +04± +92±

32 33 34 35 36

12'± 12'± 24'±

ONLY ONLY ONLY ONLY

M2-H10-60 SOUTH INTERSTATE 75 ONLY

M2-H10-60 NORTH INTERSTATE 75 ONLY

R3-5A-30 ONLY

R3-5A-30 ONLY

R3-5R-30 ONLY

Austin Blvd
NEXT SIGNAL
D3-2-66

SN-101

STA. 34+63, 62.2' RT
TC-16.21, DES. 14 SUPPORT, 70' ARM
WITH DAMPENING DEVICE

NOTES:

1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.
2. PROPOSED LONGITUDINAL MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.
3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS
4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:

STATE OF OHIO
AARON
LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED NDE
CHECKED ADL

TRAFFIC CONTROL PLAN
S.R. 741

MOT-75-0.76

67
106

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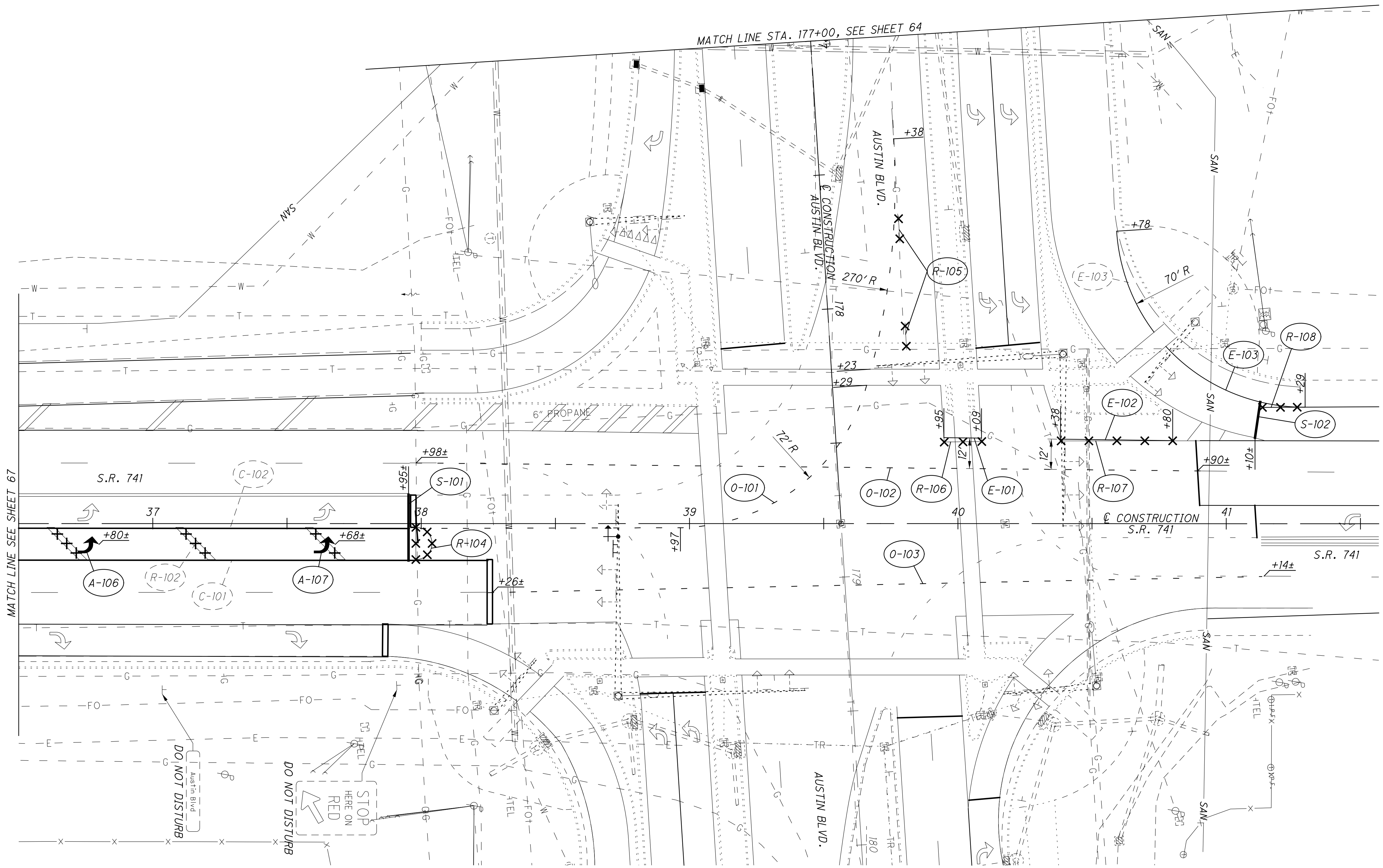


NOTES:

1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.

2. PROPOSED MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.

3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS

4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

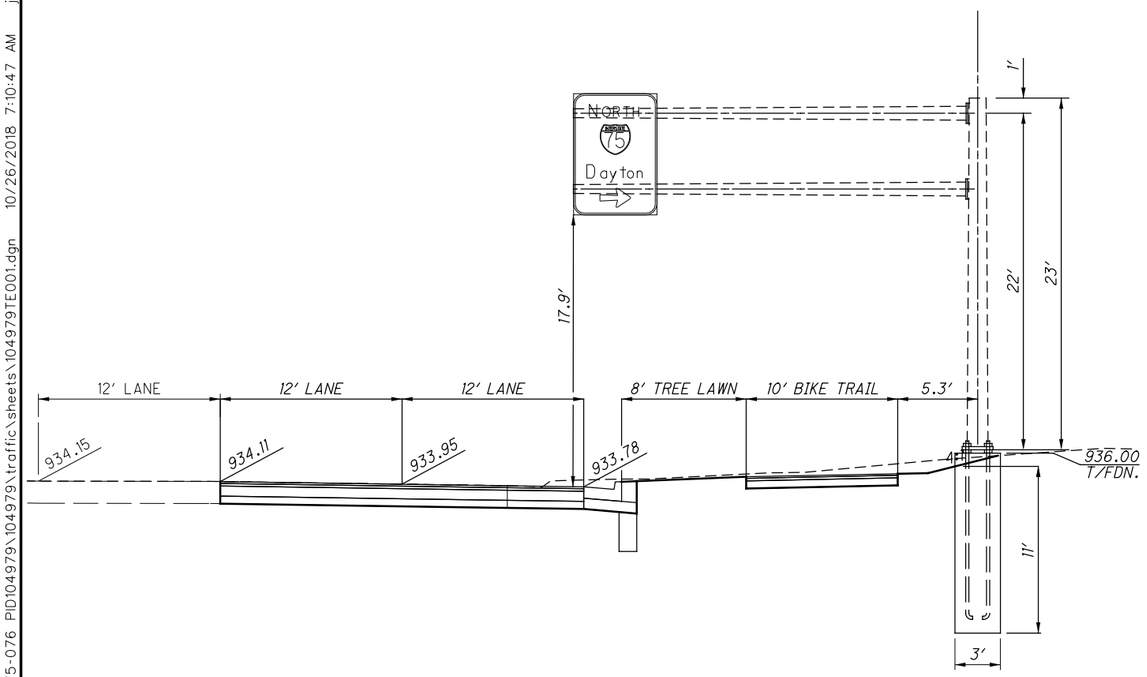
N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED NDE
CHECKED ADL

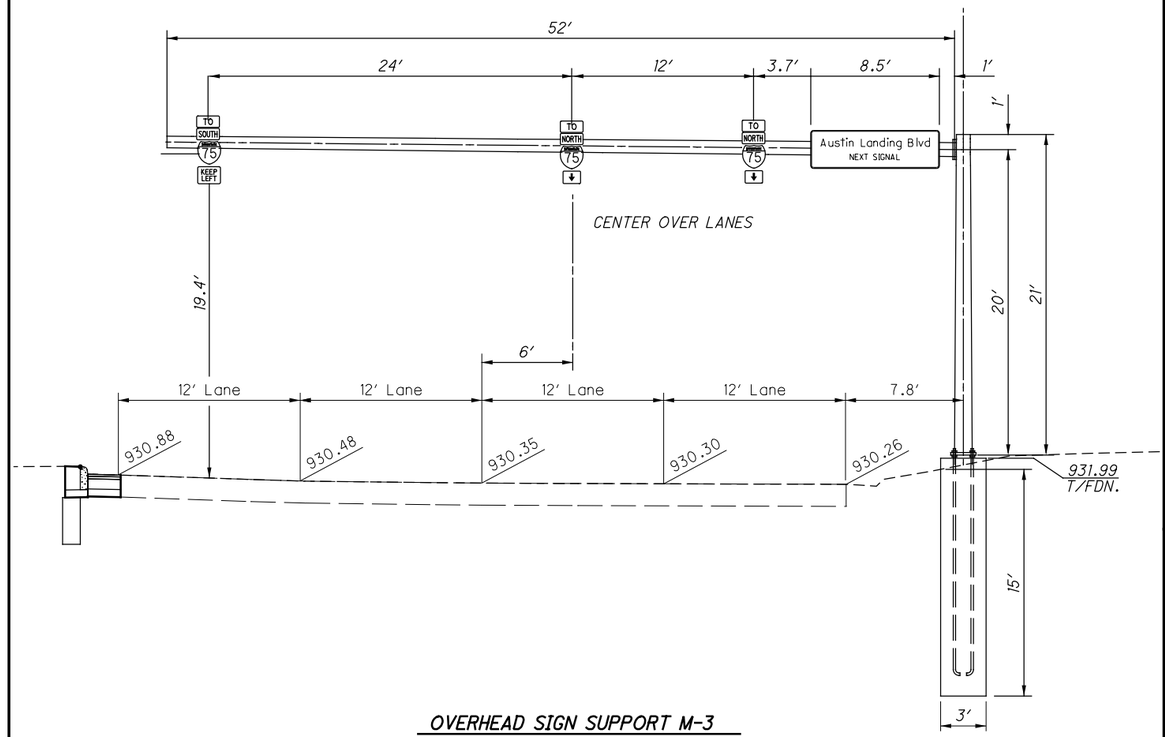
TRAFFIC CONTROL PLAN
S.R.-741 & AUSTIN BLVD.

MOT-75-0.76



OVERHEAD SIGN SUPPORT M-1

STA. 159+25 AUSTIN BLVD.
EX. TC-12.30, DESIGN 6
EX. ARM LENGTH =26'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 17.94'



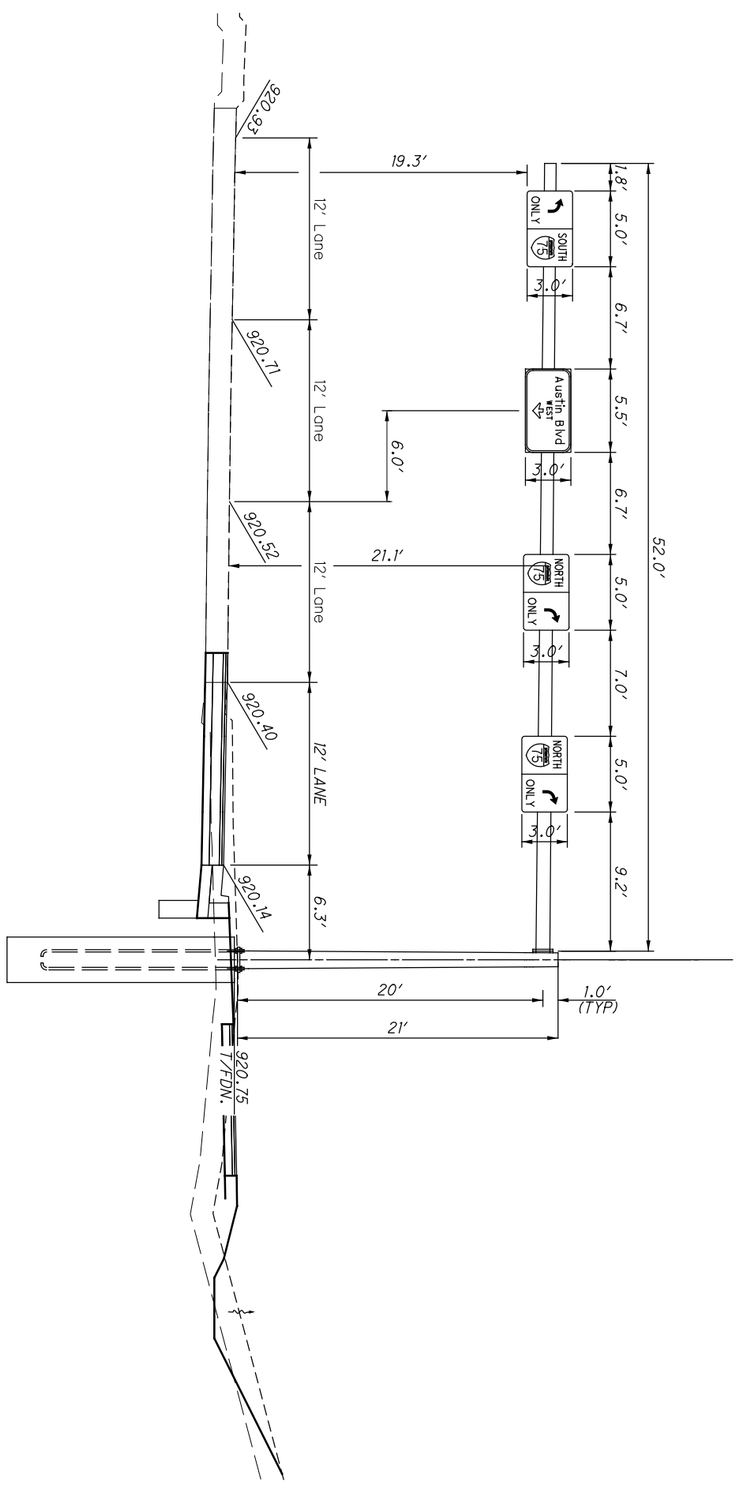
OVERHEAD SIGN SUPPORT M-3

STA. 169+25 AUSTIN BLVD.
TC-16.21 DESIGN 13
ARM LENGTH = 52'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 19.43'

SIGN ELEVATIONS, AUSTIN BOULEVARD
M-1 STA. 159+25, M-3 STA. 169+25

CALCULATED LAS
CHECKED PCG

MOT-75-0.76



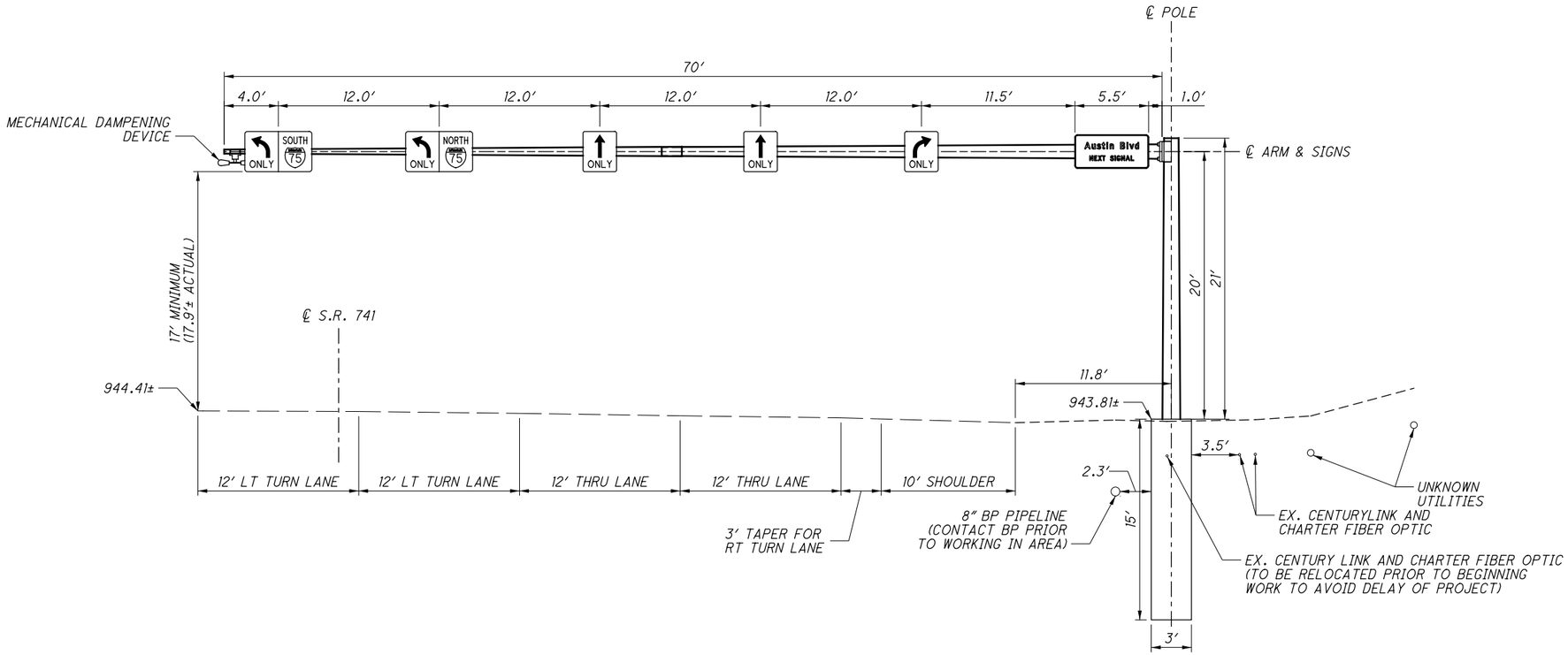
OVERHEAD SIGN SUPPORT M-2

STA. 163+55 AUSTIN BLVD.
TC-96.21, DESIGN 14
ARM LENGTH= 52'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 19.27'

MOT-75-0.76

SIGN ELEVATION, AUSTIN BOULEVARD
M-2 STA. 163+55

CALCULATED LAS
CHECKED PCG



PROPOSED SINGLE ARM OVERHEAD SUPPORT

STA. 34+63, 62.2′ RT, S.R. 741
SIGN AREA: 66.3 SF
TC-16.21, DESIGN 14 SUPPORT, 70′ ARM WITH DAMPENING DEVICE

SN-101

ENGINEERS SEAL:

STATE OF OHIO
AARON
LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED NDE
CHECKED ADL

OVERHEAD SIGN ELEVATION
S.R. 741

MOT-75-0.76

GENERAL REQUIREMENTS

THE PURPOSE OF THIS SPECIFICATION AND THE ASSOCIATED PLANS IS TO RESULT IN THE MODIFICATION OF EXISTING TRAFFIC SIGNAL INSTALLATIONS AND TO RELOCATE THE EXISTING FIBEROPTIC INTERCONNECT CABLE SYSTEM ALONG AUSTIN PIKE IN MONTGOMERY COUNTY, OHIO. THESE PLANS AND SPECIFICATIONS ARE TO RESULT IN A FULLY FUNCTIONAL TRAFFIC SIGNAL SYSTEM THAT SHALL OPERATE ACCORDING TO THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

614, MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

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

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION AT EACH INTERSECTION INCLUDED IN THIS PROJECT FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

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

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

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

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

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

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

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6 TO 9 AM OR 3 TO 7 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, UNLESS PROTECTED BY OFF-DUTY MIAMI TOWNSHIP POLICE, OHIO STATE PATROL OR COUNTY SHERIFF'S DEPUTIES, HIRED BY THE CONTRACTOR. THE FOLLOWING INTERSECTIONS, AT MINIMUM, SHALL BE PROTECTED BY A LAW ENFORCEMENT OFFICER:

-AUSTIN BOULEVARD AND NORTHBOUND I-75 RAMP
-AUSTIN BOULEVARD AND AUSTIN LANDING BOULEVARD
-AUSTIN BOULEVARD AND & SR 741

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

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

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

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

SIGNALS ARE MAINTAINED BY THE FOLLOWING:

-AUSTIN BLVD AND NORTHBOUND I-75 RAMP--STATE OF OHIO
-AUSTIN BLVD AND AUSTIN LANDING BLVD--MONTGOMERY COUNTY ENGINEER
-AUSTIN BLVD AND & SR 741--STATE OF OHIO

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

TEMPORARY SIGNAL MODIFICATIONS

PLACE TWO WOOD POLES AT THE LOCATIONS SHOWN ON THE SIGNAL PLAN.
PLACE MESSENGER WIRE BETWEEN SIGNAL SUPPORT P1 AND THE NEARBY WOOD POLE.
ROUTE TEMPORARY SIGNAL CABLE THROUGH THE UPPER HANDHOLE OF P1, THROUGH THE EXISTING CONDUIT TO THE CONTROLLER.
PROVIDE TEMPORARY STOP BAR DETECTION IN THE SAME DETECTION ZONES AS SHOWN ON THE PLAN EITHER BY RELOCATING THE VIDEO DETECTION OR BY TEMPORARY RADAR DETECTION.

SIGNAL ACTIVATION

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

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

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

DETECTION MAINTENANCE

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

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

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

WORK INSPECTION

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

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS AFTER THE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL AND COMPLETION OF ALL PUNCH LIST ITEMS. 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 SIGNALS INSTALLATION SUPPLIED BY THE CONTRACTOR: CONTROLLER, CABINET, UNINTERRUPTABLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/INTERCONNECT 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.

GROUNDING AND BONDING

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

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

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

E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

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

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

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

COND. NO. COLOR VEHICLE SIGNAL PEDESTRIAN SIGNAL

1 BLACK GREEN BALL #1 WALK
2 WHITE AC NEUTRAL AC NEUTRAL
3 RED RED BALL #1 DW/FDW
4 GREEN EQUIPMENT GROUND EQUIPMENT GROUND
5 ORANGE YELLOW BALL #2 DW/FDW
6 BLUE GREEN ARROW #2 WALK
7 WHITE/BLACK STRIPE YELLOW ARROW NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

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

B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

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

625, CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.14, PROVIDE LOCATING AND DEPTH FINDING FOR INTERSECTING UTILITIES AS DIRECTED BY THE ENGINEER. USE A LOW IMPACT SYSTEM SUCH AS A VACUUM / HYDRO TRUCK TO POTHOLE PAVEMENT OR EARTH AREAS. RESTORE PAVED AREAS ACCORDING TO 625.13 USING THE THICKNESS FOR TRENCH IN PAVED AREAS, TYPE B. RESTORE EARTH AREAS BY FILLING THE RESULTING POTHOLE. ENSURE THE RESTORED AREAS ARE SAFE FOR VEHICULAR OR PEDESTRIAN TRAFFIC.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN <BY SIZE>" IN PLACE INCLUDING ALL CONNECTIONS, TESTED AND ACCEPTED.

625, PULL BOX, 725.08, 32", AS PER PLAN

INSTALL 32" ROUND PULL BOX IN ACCORDANCE WITH ODOT SCD ITS-14.11. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL INCLUDING HARDWARE NECESSARY FOR A COMPLETE INSTALLATION.

631, SIGN LIGHTING, MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION

CAREFULLY REMOVE AND DISCONNECT THE ELECTRICAL CONNECTIONS TO THE OVERHEAD MOUNTED SIGN ON SUPPORT SP4. STORE THE SIGN AND REERECT ON THE SIGNAL SUPPORT.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 631 SIGN LIGHTING, MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION", COMPLETE.

632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, SIGNAL SUPPORTS, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY THE MAINTAINING AGENCY IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

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ITEMS TO BE REMOVED AND REUSED:

-SIGNAL SUPPORT P2
-VEHICULAR SIGNAL HEADS
-PEDESTRIAN SIGNAL HEAD
-VIDEO DETECTION CAMERA

ITEMS TO BE REMOVED AND DELIVERED:

-DECORATIVE LUMINAIRE

REMOVED ITEMS SHALL BE DELIVERED TO MIAMI TOWNSHIP FACILITY WHOSE ADDRESS IS LISTED BELOW:

MIAMI TOWNSHIP PUBLIC WORKS
10891 WOOD ROAD
MIAMISBURG, OHIO 45342
937-866-4661

AUSTIN BOULEVARD & AUSTIN LANDING BOULEVARD

ITEMS TO BE REMOVED AND REUSED:

-PEDESTRIAN SIGNAL HEAD PHF
-PUSHBUTTON F
-POLE MOUNTED SIGNS SN15, SN18, SN24, AND SN25
-LED BACK LIT SIGN SN22
-VEHICLE SIGNAL HEADS W1 AND W2
-VIDEO DETECTION CAMERA

ITEMS TO BE REMOVED AND DELIVERED:

-SIGNAL SUPPORT SP-1
-OVERHEAD SIGN SN12, SN13
-VEHICLE SIGNAL HEAD W3
-BRACKET ARM

REMOVED ITEMS SHALL BE DELIVERED TO THE FACILITY WHOSE ADDRESS IS LISTED BELOW:

MONTGOMERY COUNTY ENGINEER, OPERATIONS DIVISION
5625 LITTLE RICHMOND ROAD
DAYTON, OHIO 45426
937-837-2528

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

632, PEDESTAL, (LENGTH), TRANSFORMER BASE, AS PER PLAN

THE EXTERIOR OF PEDESTALS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 632 PEDESTAL, (LENGTH), TRANSFORMER BASE, AS PER PLAN", COMPLETE.

632, COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN

THE EXTERIOR OF SIGNAL SUPPORTS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN", COMPLETE.

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

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

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

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

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

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632, SIGNAL SUPPORT, MISC.: ANCHOR BOLTS

--PROVIDE ANCHOR BOLTS OF THE CORRECT SIZE AND LENGTH CONFORMING TC-21.10 FOR A TC-81.21 DESIGN 14 SIGNAL SUPPORT.

--VERIFY THE DIAMETER OF THE ANCHOR BOLT WITH THE EXISTING CUSTOM SIGNAL SUPPORT TO BE RELOCATED.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632 SIGNAL SUPPORT, MISC.: ANCHOR BOLTS".

625, BRACKET ARM, 10', AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 625 POWDER COAT THE EXTERIOR OF BRACKET ARMS BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 625 BRACKET ARM, 10', AS PER PLAN", COMPLETE.

632, VEHICULAR SIGNAL HEAD, (LED), (BY TYPE), AS PER PLAN

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

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

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

3. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL.

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

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

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

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

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

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

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

11. FIELD DRILL EXISTING OR RELOCATED SIGNAL SUPPORTS TO PROVIDE THE PROPER CABLE PATH AND MOUNTING OF SIGNAL HEADS AS SHOWN ON TC-85.20.

PAYMENT FOR "ITEM 632 VEHICULAR SIGNAL HEAD, LED, (BY TYPE), AS PER PLAN" SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

632, COVERING OF VEHICULAR SIGNAL HEAD

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

632, VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD

THIS ITEM SHALL INCLUDE ALL COORDINATION, HARDWARE, CONNECTORS, TROUBLESHOOTING AND RESOLUTION NECESSARY TO REMOVE AND RELOCATE AN EXISTING VEHICULAR SIGNAL HEAD AS INDICATED IN THE PLANS.

EXISTING SIGNAL CABLE CONNECTING THE CONTROLLER CABINET TO THE EXISTING VEHICULAR SIGNAL HEADS SHALL BE REUSED BY THE CONTRACTOR AS SHOWN IN THE PLANS. UNUSED OR EXCESS SIGNAL CABLE SHALL BE REMOVED.

ALL EXPOSED PORTIONS OF MOUNTING HARDWARE SHALL BE PAINTED TO MATCH THE EXISTING SIGNAL SUPPORT.

WHERE THE EXISTING SIGNAL CABLE IS NOT SUFFICIENT NEW SIGNAL CABLE SHALL BE INSTALLED CONNECTING THE RELOCATED VEHICULAR SIGNAL HEADS TO THE CONTROLLER AS SHOWN IN THE PLANS. NO SPLICES WILL BE PERMITTED. ANY PROPOSED SIGNAL CABLE IS INCLUDED AS A PART OF ITEM 632, SIGNAL CABLE, 7-CONDUCTOR, NO. 14 AWG AND IS PAID FOR SEPARATELY.

EXISTING VEHICULAR SIGNAL HEADS TO BE RELOCATED SHALL BE RE-LAMPED. NEW LAMPS SHALL MATCH EXISTING LAMPS AND SHALL CONFORM TO CMS ITEM 732.04.

FIELD DRILL EXISTING OR RELOCATED SIGNAL SUPPORTS TO PROVIDE THE PROPER CABLE PATH AND MOUNTING OF SIGNAL HEADS AS SHOWN ON TC-85.20.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632, VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD".

632, REUSE OF SIGNAL SUPPORT, AS PER PLAN

THE INTENT OF THIS ITEM IS TO RELOCATE AN EXISTING SIGNAL SUPPORT IN A DIFFERENT ORIENTATION. IN ADDITION TO THE REQUIREMENTS OF CMS 632.27:

--PLUG UNUSED COUPLINGS IN THE EXISTING SUPPORT WITH GALVANIZED CAST IRON PLUGS. PLUG OTHER UNUSED OPENINGS WITH PLASTIC PLUGS.

--REPAINT SCRATCHES ON THE SUPPORT TO MATCH THE EXISTING FINISH. REPAINT CAST IRON PLUGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632 REUSE OF SIGNAL SUPPORT, AS PER PLAN".

633, CONTROLLER ITEM, MISC.: ADD PHASES

IN ADDITION TO THE REQUIREMENTS OF CMS 632.27:

THE CONTRACTOR SHALL REUSE AND REVISE THE EXISTING CONTROLLER, CABINET, AND MISCELLANEOUS TRAFFIC CONTROL ITEMS WITHIN THE CABINET AT THE INTERSECTION OF NORTHBOUND I-75 RAMPS AND AUSTIN BOULEVARD. THE WORK WILL INCLUDE BUT IS NOT LIMITED TO THE ADDITION OF A VEHICLE PHASE, AN ACTUATED PEDESTRIAN PHASE, REWIRING OF SIGNAL CABLES, LOADING REVISED SIGNAL TIMINGS, PROVIDING LOAD SWITCHES, REPROGRAMMING OF THE MALFUNCTION MANAGEMENT UNIT, WIRING HARNESS MODIFICATIONS AND OTHER CABINET ALTERATIONS.

PROVIDE CABINET DRAWINGS PLACE THEM IN THE TRAFFIC SIGNAL CABINET. PROVIDE A PDF FORMAT OF THE CABINET DRAWINGS TO THE DISTRICT SEVEN TRAFFIC ENGINEER.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 633, CONTROLLER ITEM, MISC.: ADD PHASES" IN PLACE INCLUDING ALL CONNECTIONS, TESTED AND ACCEPTED.

633, CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS

ENTER THE PROVIDED SIGNAL SYSTEM TIMINGS INTO THE EXISTING CONTROLLER.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER 72 HOURS BEFORE ACTIVATING THE REVISED SIGNAL TIMINGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 633, CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS".

804, FIBER OPTIC CABLE, 24 FIBER, AS PER PLAN

THIS PROJECT INCLUDES AN ESTIMATED QUANTITY OF THIS CONTINGENCY ITEM FOR USE AS DIRECTED BY THE ENGINEER. IF THE EXISTING FIBER OPTIC CABLE CANNOT BE REUSED DUE TO A PRE-EXISTING CONDITION, THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FIBER OPTIC CABLE, EVIDENCE OF THE PRE-EXISTING CONDITION AND NEED TO UTILIZE THIS CONTINGENCY ITEM SHALL BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL.

REMOVAL OF THE EXISTING CABLE AND DISPOSAL AND FIBER OPTIC SPLICES ASSOCIATED WITH CONNECTING THE NEW CABLE AS SHOWN IN THE PLANS ARE INCIDENTAL TO THIS PAY ITEM. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF FIBER OPTIC CABLE, 24 FIBER, AS PER PLAN IN PLACE INCLUDING CONNECTIONS, TESTED AND ACCEPTED.

804, FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE

THE CONTRACTOR SHALL DISCONNECT AND PULL BACK THE EXISTING UNDERGROUND FIBER OPTIC INTERCONNECT CABLE BACK TO THE NEAREST PULL BOX, USING PROPER STORAGE AND HANDLING TECHNIQUES, TO SAFELY STORE THE CABLE IN A LOCATION NOT IMPACTED BY PROJECT CONSTRUCTION FROM WHICH IT CAN THEN BE REINSTALLED AND CONNECTED TO THE PROPOSED EQUIPMENT VIA THE PROPOSED PATHWAY AS SPECIFIED IN THESE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR WEATHERPROOFING THE EXPOSED END(S) OF THE FIBER OPTIC CABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF THE EXISTING INTERCONNECT CABLE SUCH THAT NO DAMAGE OCCURS TO IT PHYSICALLY OR FUNCTIONALLY. SHOULD ANY DAMAGE OCCUR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND INCUR THE EXPENSE OF ANY ALL NECESSARY CORRECTIVE ACTIONS, INCLUDING BUT NOT LIMITED TO REPLACING THE EXISTING EQUIPMENT AND CABLE TO THE NEAREST SPLICE OR SIMILAR POINT WHERE THE FIBER OPTIC CABLE CONNECTION IS INTERRUPTED.

THE INSTALLATION OF THE EXISTING CABLE VIA THE NEW PATHWAY AND THE FIBER OPTIC SPLICES ASSOCIATED WITH RECONNECTING THE EXISTING CABLE AS SHOWN IN THE PLANS ARE INCIDENTAL TO THIS PAY ITEM.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 804 FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE IN PLACE INCLUDING CONNECTIONS, TESTING AND ACCEPTED.

804, FIBER OPTIC CABLE TESTING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 804.13, THE FOLLOWING REQUIREMENTS ARE ESTABLISHED:

AS-BUILT DOCUMENTATION

WHILE INSTALLING AND TESTING THE INSTALLATION, THE CONTRACTOR IS TO MARK PRINTS WITH ANY FIELD CHANGES THAT WERE INITIATED DURING CONSTRUCTION. THESE ARE COMMONLY REFERRED TO AS "AS-BUILTS".

AS-BUILT DOCUMENTATION SHALL INCLUDE THE FOLLOWING INFORMATION:

1. PLAN SHEETS WITH THE LOCATION OF CONDUIT IN ROADWAY HAND MARKED.

2. PLAN SHEETS WITH THE SIZES OF CONDUIT HAND MARKED.

3. PLAN SHEETS WITH THE LOCATIONS OF ALL PULL BOXES AND SPLICES HAND MARKED.

4. PLAN SHEETS WITH THE SIZES OF FIBER OPTIC CABLES HAND MARKED.

5. REVISED SPLICE DIAGRAMS HAND MARKED.

6. FOR NEW CABLE, THE PRE-INSTALLATION, ON-REEL ATTENUATION LOSS OTDR TRACES OF EACH CABLE FIBER IN DB/KM SHOWING CABLE/SHEATH LENGTH (NOT OPTICAL FIBER LENGTH), 2-POINT DB LOSS, ATTENUATION IN DB/KM, FIBER TYPE, WAVELENGTH USED, PULSE WIDTH SELECTION, AND FIBER/CABLE IDENTIFICATION. OTDR TRACES SHALL BE HARD COPY AND ELECTRONIC.

7. THE INSTALLED ATTENUATION LOSS OTDR TRACES OF EACH CABLE FIBER IN DB/KM SHOWING CABLE/SHEATH LENGTH (NOT OPTICAL FIBER LENGTH), 2-POINT DB LOSS, ATTENUATION IN DB/KM, FIBER TYPE, WAVELENGTH USED, PULSE WIDTH SELECTION, AND FIBER/CABLE IDENTIFICATION. OTDR TRACES SHALL BE HARD COPY AND ELECTRONIC.

ALL COSTS TO PERFORM THE ABOVE TESTING AND DOCUMENTATION SHALL BE INCLUDED IN THE BID LUMP SUM PRICE FOR ITEM 804 FIBER OPTIC CABLE TESTING, AS PER PLAN. ANY LINK THAT FAILS THE ABOVE TESTS SHALL BE RESPLICED OR REPLACED UNTIL THESE REQUIREMENTS ARE MET. THE COST OF RESPLICING, REPLACING AND RETESTING CABLE IS AT THE CONTRACTOR'S EXPENSE.

CALCULATED LAS CHECKED PCG

TRAFFIC SIGNAL - GENERAL NOTES

MOT-75-0.76

816, VIDEO DETECTION SYSTEM, AS PER PLAN

REUSE THE EXISTING VIDEO DETECTION CAMERA PER CMS 632.27.

PROVIDE NEW VIDEO DETECTION CABLE FROM THE CAMERA BACK TO THE CONTROLLER.

PROVIDE A NEW MOUNTING BRACKET TO MOUNT THE CAMERA TO THE SIGNAL SUPPORT.

PAINT THE MOUNTING HARDWARE TO MATCH THE SIGNAL SUPPORT.

CLEAN AND REPAIR THE CAMERA TO ENSURE IT IS IN GOOD SERVICEABLE CONDITION.

RE-AIM THE VIDEO DETECTION CAMERA PER ITEM 816 TO REESTABLISH THE EXISTING NORTHBOUND RAMP DETECTION ZONES.

FIELD DRILL THE EXISTING SIGNAL SUPPORT.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 816 VIDEO DETECTION SYSTEM, AS PER PLAN".

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL NOTES

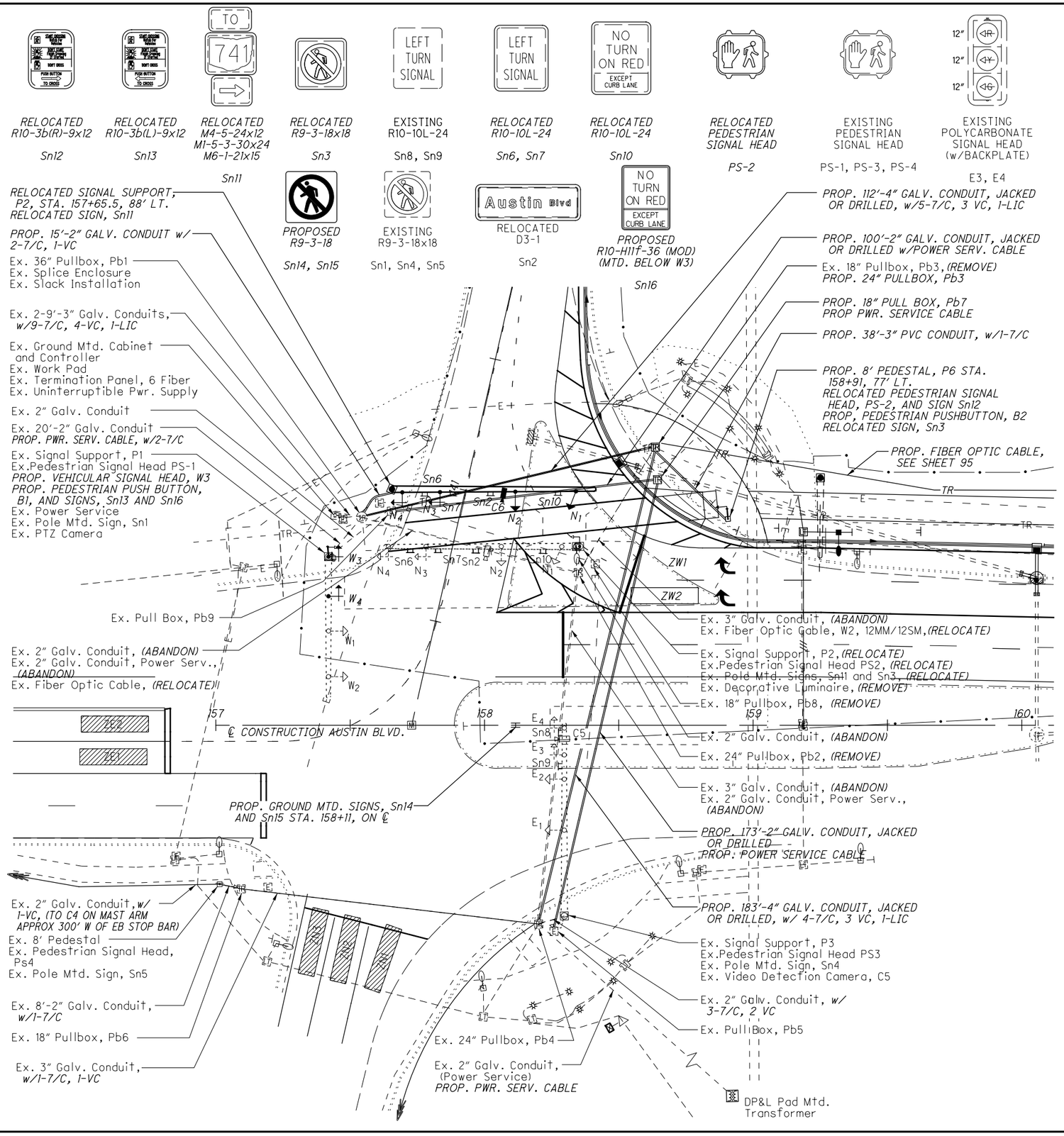
MOT-75-0.76

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
82	83	84	89	90	96A						01/MS/OT								
																		TRAFFIC SIGNALS	
	15				730						745			625	25400	745	FT	CONDUIT, 2", 725.04	
	38			6							44			625	25502	44	FT	CONDUIT, 3", 725.05	
	273				245						518			625	25903	518	FT	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 2"	74
	773			138							911			625	25903	911	FT	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 4"	74
				1							1			625	27520	1	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
	53			6	730						789			625	29000	789	FT	TRENCH	
	1			1							2			625	30700	2	EACH	PULL BOX, 725.08, 18"	
	1										1			625	30706	1	EACH	PULL BOX, 725.08, 24"	
					1						1			625	30711	1	EACH	PULL BOX, 725.08, 32", AS PER PLAN	74
	3			1	2						6			625	31510	6	EACH	PULL BOX REMOVED	
2			1								3			625	32000	3	EACH	GROUND ROD	
				1							1			625	35520	1	EACH	REMOVE AND REERECT BRACKET ARM	
		14									14			630	03100	14	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
		5		4	2						11			630	79100	11	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
					2						2			630	79200	2	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM	
		4		2							6			630	79500	6	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
		17		9	15						41			630	80100	41	SF	SIGN, FLAT SHEET	
		4		2							6			630	87100	6	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				2							2			630	87400	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
		6		2							8			630	87520	8	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
				1							1			631	97700	1	EACH	SIGN LIGHTING MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	74
4			2								6			632	04000	6	EACH	VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD	75
2			2		1						5			632	05007	5	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	75
6			5								11			632	25000	11	EACH	COVERING OF VEHICULAR SIGNAL HEAD	75
2			1								3			632	25010	3	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
2											2			632	26000	2	EACH	PEDESTRIAN PUSHBUTTON	
	1										1			632	27200	1	EACH	LOOP DETECTOR TIE IN	
				232							232			632	30980	232	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 10 AWG	
	48			233							281			632	40300	281	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	
	5,579			741	25						6,345			632	40700	6,345	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
1			1								2			632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION	
1											1			632	64020	1	EACH	PEDESTAL FOUNDATION	
	529										529			632	65200	529	FT	LOOP DETECTOR LEAD-IN CABLE	
	430										430			632	68300	430	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
1			1								2			632	77230	2	EACH	SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH)	74
1											1			632	80700	1	EACH	SIGNAL SUPPORT, MISC.: ANCHOR BOLTS	75
			1								1			632	81095	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN	74
1											1			632	89901	1	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	74
1			1								2			632	90100	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	74
					1						1			632	90104	1	EACH	REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION SYSTEM	
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: SPLICE ENCLOSURE	
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: DROP CABLE	
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: TERMINATION PANEL	
1			1								2			632	90202	2	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD	
1											1			632	90207	1	EACH	REUSE OF SIGNAL SUPPORT, AS PER PLAN	75
			1								1			632	90210	1	EACH	REUSE OF PEDESTRIAN PUSHBUTTON	
1											1			633	99000	1	EACH	CONTROLLER ITEM, MISC.: ADD PHASES	75
1			1								2			633	99000	2	EACH	CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS	75
					1,150						1,150			804	15010	1,150	FT	FIBER OPTIC CABLE, 24 FIBER	75
					LS						LS			804	37701	LS		FIBER OPTIC CABLE TESTING, AS PER PLAN	75
					1						1			804	98100	1	EACH	FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE	75
	4			1							5			816	30001	5	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	76

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL GENERAL SUMMARY

MOT-75-0.76



NOTE 1 :

MOUNT SIGNAL HEAD W3, SO THE BOTTOM IS 14' ABOVE FOUNDATION.

REMOVAL ITEMS FOR REUSE

SIGNAL SUPPORT.....1
VEHICULAR SIGNAL HEAD.....4
PEDESTRIAN SIGNAL HEAD.....1
PEDESTRIAN PUSHBUTTON.....1
SIGNS.....2

REMOVAL ITEMS FOR STORAGE

DECORATIVE LUMINAIRE.....1

REMOVAL ITEMS FOR DISPOSAL

FOUNDATION.....1
CABLING.....

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD (332)		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
DILEMMA ZONE RADAR DETECTION UNIT		
STOP BAR RADAR DETECTION UNIT		
PTZ CAMERA		
ETHERNET RADIO		
LOOP DETECTOR		
DETECTION ZONE		

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL PLAN
RAMP H, RAMP J AND AUSTIN BLVD

MOT-75-0.76

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SIGNAL TIMING CHART

INTERSECTION: Austin Blvd and I-75 NB Ramps MAINTAINING AGENCY: State of Ohio District 7								
START UP		DUAL ENTRY: YES		PHASES:			-	
		REST IN RED:		RING 1 -			RING 2 -	
START IN: YELLOW/RED FLASH TIME FOR FLASH OR ALL RED: 5 FIRST PHASE(S): 2 & 6 COLOR DISPLAYED: YELLOW		OVERLAP			A	B	C	D
		PHASES			6+7	-	-	-
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	EB	-	NB	EB LT	WB	WB RT	-
MINIMUM GREEN (INITIAL)	(SEC.)	-	25	-	7	7	25	25	-
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	-	3	-	3	3	3	3	-
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	-	40	-	30	25	40	40	-
MAXIMUM GREEN II	(SEC.)	-	50	-	40	35	50	50	-
YELLOW CHANGE	(SEC.)	-	4.5	-	4.3	3	4.5	4.5	-
ALL RED CLEARANCE	(SEC.)	-	1	-	2.1	2	1	1	-
WALK	(SEC.)	-	10	-	-	-	10	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	24	-	-	-	27	-	-
RECALL	MAXIMUM (ON/OFF)	-	NO	-	NO	NO	NO	NO	-
	MINIMUM (ON/OFF)	-	YES	-	NO	NO	YES	YES	-
	PEDESTRIAN (ON/OFF)	-	YES	-	NO	NO	YES	YES	-
MEMORY	(ON/OFF)	-	OFF	-	OFF	OFF	OFF	OFF	-

*VOLUME DENSITY CONTROLS

PULL BOX CHART

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
Pb1	157+53	LT	78'	36" Ex
Pb2	158+34	LT	57'	24" REMOVE
Pb3	158+63	LT	104'	24" PROP
Pb4	158+20	RT	74'	24" Ex
Pb5	156+26	RT	77'	24" Ex
-	-	-	-	-
Pb6	157+04	RT	60'	18" Ex
Pb7	158+64	LT	91'	18" PROP
Pb8	158+41	LT	60'	18" REMOVE
Pb9	157+65	LT	80'	18"

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
ZN1	NB THRU	PRESENCE	4	8	-	4	CALL/EXTEND PHASE 4	25
ZN2	NB THRU	PRESENCE	4	-	-	-	CALL/EXTEND PHASE 4	25
ZN3	NB LT	PRESENCE	4	-	-	-	CALL/EXTEND PHASE 4	25
-	-	-	-	-	-	-	-	-
ZE1	EB LT	PRESENCE	5	-	-	-	CALL/EXTEND PHASE 5	25
ZE2	EB LT	PRESENCE	5	-	-	-	CALL/EXTEND PHASE 5	25
ZW1	WB THRU	PRESENCE	6	-	-	-	CALL/EXTEND PHASE 6	25
ZW2	WB THRU	PRESENCE	6	-	-	-	CALL/EXTEND PHASE 6	25

NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

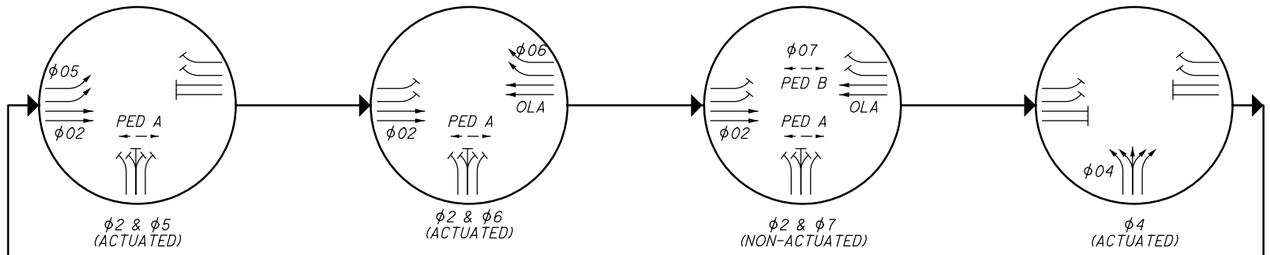
PHASING DIAGRAM (TYPICAL)

LEGEND

VEHICLE ϕ

PERMITTED ϕ

PEDESTRIAN ϕ



		BARRIER	BARRIER
RING 1	1 2		4
RING 2	5 6 7		

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL DETAILS
RAMP H, RAMP J AND AUSTIN BLVD

MOT-75-0.76

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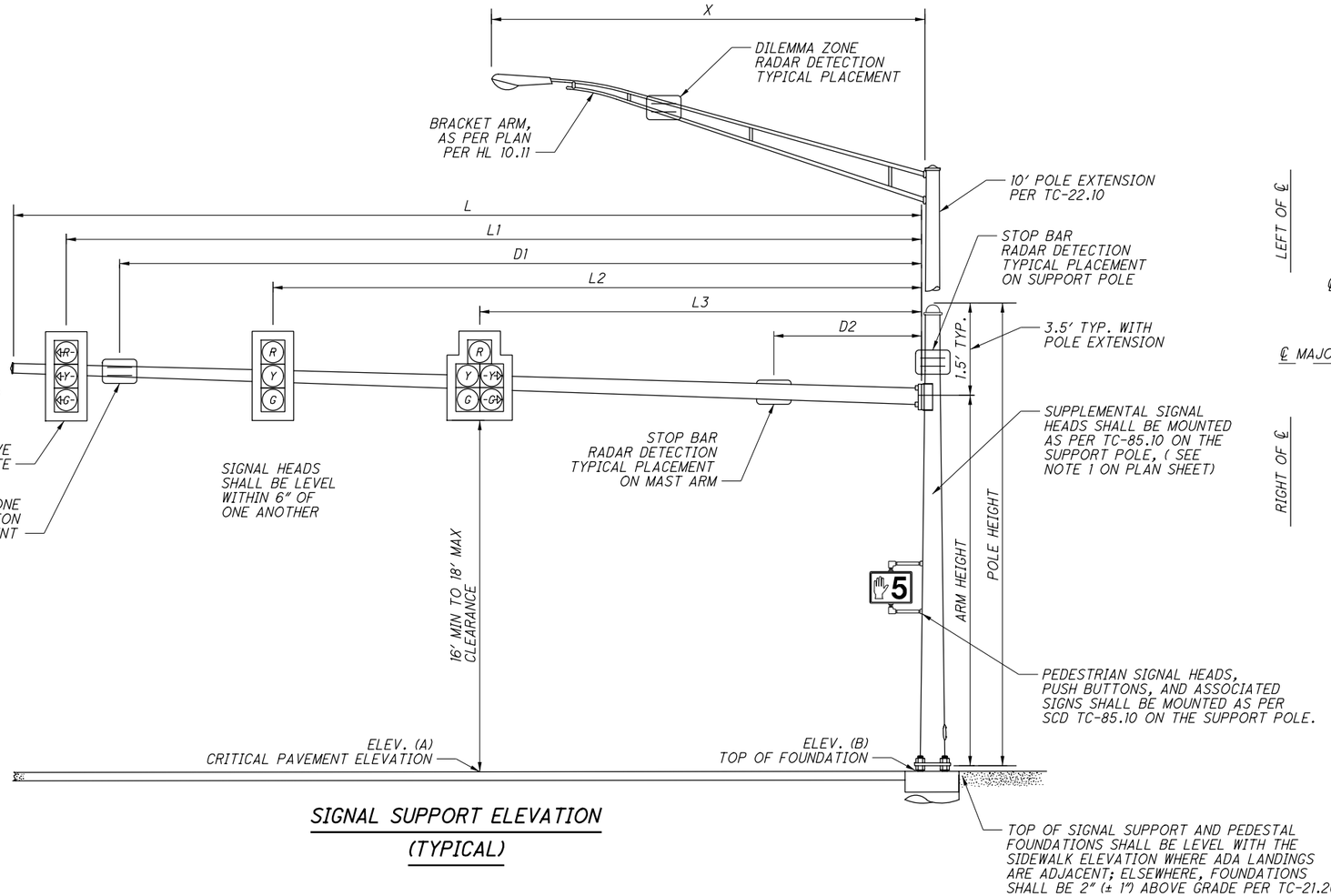
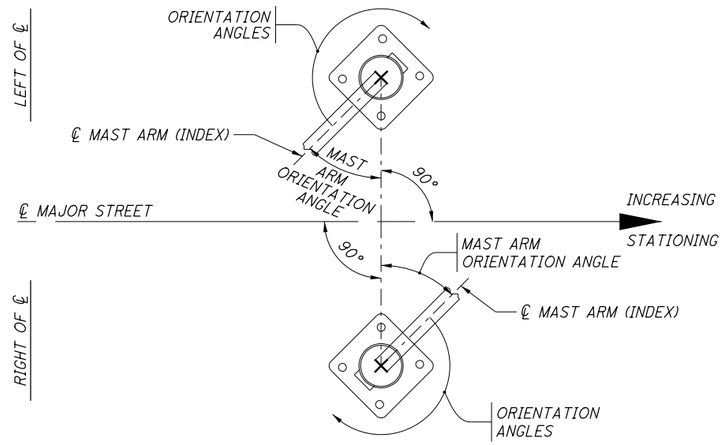


SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS														ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	D1	L4	L5	L6	L7	L8	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	PTZ CAMERA	SIGN	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
							FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
P1	157+41	63' LT	EX.	EX.	EX. SPEC	EX. SPEC.	42	-	54	51	28	15.5	-	3.5				-	0	-	180	-	-	45	0	180	-
P2	157+65.5	88' LT	938.04	939.01	EX. SPEC	EX. SPEC.	23	19.5	73	68.5	62	46	42	36	21	18	7	4	-	-	-	-	-	-	-	180	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	-	-

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL DETAILS
RAMP H, RAMP J AND AUSTIN BLVD

MOT-75-0.76

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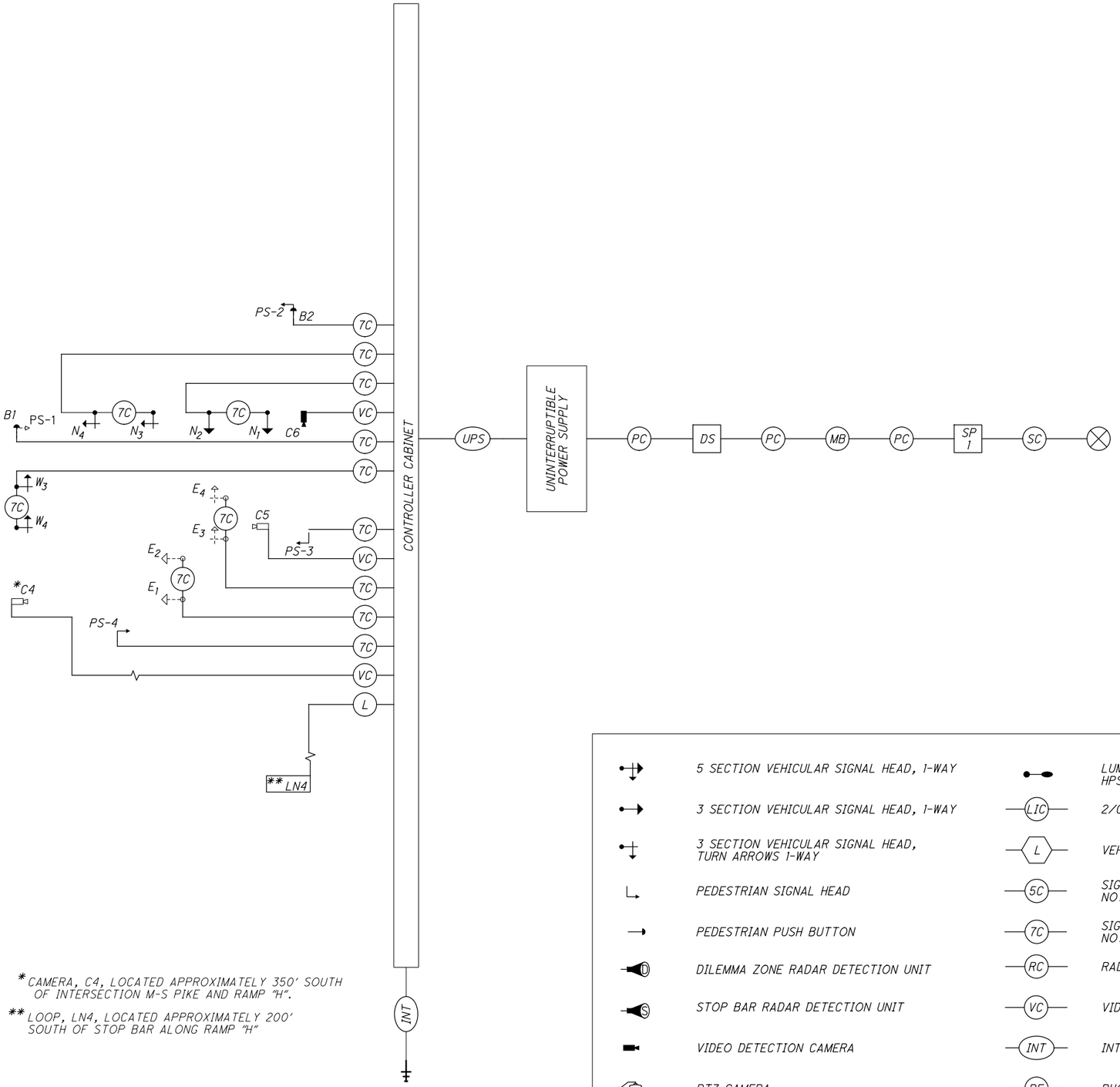
WIRING DIAGRAM (TYPICAL)



*CAMERA, C4, LOCATED APPROXIMATELY 350' SOUTH OF INTERSECTION M-S PIKE AND RAMP "H".

**LOOP, LN4, LOCATED APPROXIMATELY 200' SOUTH OF STOP BAR ALONG RAMP "H"

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
W1 W2 (WB)	R	EX P6 R	Y
	Y	EX P6 Y	
	G	EX P6 G	
	-	-	
	-	-	
E1 E2 (EB)	R	EX P2 R	Y
	Y	EX P2 Y	
	G	EX P2 G	
	-	-	
	-	-	
W3 W4 (WB RT)	R	P1 R	Y
	---Y-->	P1 Y	
	---G-->	P1 G	
	-	-	
	-	-	
E3 E4 (EB LT)	<--R---	EX P5 R	Y
	<--Y---	EX P5 Y	
	<--G---	EX P5 G	
N1 N2 N3 (NB)	R	EX P4 R	R
	Y	EX P4 Y	
	G	EX P4 G	
	-	-	
	-	-	
N4 (NB LT)	<--R---	EX P4 R	R
	<--Y---	EX P4 Y	
	<--G---	EX P4 G	

LS = LOAD SWITCH

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
-	-	-	-
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	-
-	-	-	
-	-	-	
-	-	-	-
-	-	-	
-	-	-	
-	-	-	
PEDESTRIAN MOVEMENTS			
PS1 2 NORTH	DW	EX P6 DW	OUT
	W	EX P6 W	
PS3 4 SOUTH	DW	EX P2 DW	OUT
	W	EX P2 W	
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
OVERLAPS			
-	-	-	-
	-	-	
-	-	-	-
	-	-	

LEGEND

- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP BAR RADAR DETECTION UNIT
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- ETHERNET RADIO
- LUMINAIRE, CONVENTIONAL, 150 WATT, HPS, 120 VOLT, AS PER PLAN
- LIC — 2/C NO. XX AWG (LEAD-IN CABLE)
- L — VEHICLE LOOP DETECTOR
- 5C — SIGNAL CABLE, 5 CONDUCTOR, NO. XX AWG
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. XX AWG
- RC — RADAR DETECTION CABLE
- VC — VIDEO CAMERA CABLE
- INT — INTERCONNECT CABLE
- PE — PHOTOELECTRIC CELL
- POWER SOURCE
- SC — SERVICE CABLE, 3 CONDUCTOR, NO. X AWG
- PC — POWER CABLE, 2 CONDUCTOR, NO. X AWG
- SP 1 — SIGNAL SUPPORT POLE NO. __
- MB — METER BASE
- NX — NO. X AWG DISTRIBUTION CABLE
- NXX — NO. XX AWG POLE & BRACKET CABLE
- DS — DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
- FC — FLASHER CABINET
- UPS — UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL DETAILS
RAMP H, RAMP J AND AUSTIN BLVD

MOT-75-0.76

81
106

REF NO.	SHEET NO.	STATION TO STATION			632 PEDESTRIAN PUSHBUTTON EACH				632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN EACH	632 VEHICULAR SIGNAL HEAD, MISC.:RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD EACH	632 REUSE OF PEDESTRIAN SIGNAL HEAD EACH	632 SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH) EACH	632 SIGNAL SUPPORT, MISC.:ANCHOR BOLTS EACH	632 PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN EACH	632 REUSE OF SIGNAL SUPPORT, AS PER PLAN EACH	632 SIGNAL SUPPORT FOUNDATION EACH	625 GROUND ROD EACH	632 PEDESTAL FOUNDATION EACH	632 COVERING OF VEHICULAR SIGNAL HEAD EACH	632 COVERING OF PEDESTRIAN SIGNAL HEAD EACH	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION EACH	633 CONTROLLER ITEM, MISC.: ADD PHASES EACH	633 CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS EACH		
			TO																								
CONT																							1	1	1		
P1	78	157+42, 62'LT										1	1		1	1	1										
P2	78	157+65.5												1													
P6	78	158+91, 77'LT															1	1									
N1	78	P2								1									1								
N2	78	P2								1									1								
N3	78	P2								1									1								
N4	78	P2								1									1								
W3	78	P1							1										1								
W4	78	P1							1										1								
PS2	78	P6									1										1						
B1	78	P1			1																						
B2	78	P6			1																						
PS1	78	P1																			1						
TOTALS CARRIED TO GENERAL SUMMARY					2				2	4	1	1	1	1	1	1	2	1	6	2	1	1	1				

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION	625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.05 FT	625 TRENCH FT	625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 4" FT	625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 2" FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	632 LOOP DETECTOR LEAD-IN CABLE FT	632 LOOP DETECTOR TIE IN EACH	632 SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG FT	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG FT	632 POWER CABLE, 3 CONDUCTOR, NO. 6 AWG FT	816 VIDEO DETECTION SYSTEM, AS PER PLAN EACH
		TO														
		NB RAMP SIGNAL				478								3500		
PB1	78	157+53,78'LT NO WORK														
PB2	78	158+34, 57'LT								1						
PB3	78	158+63, 104'LT							1	1						
PB4	78	158+20, 74'RT NO WORK														
PB5	78	156+26,77'RT NO WORK														
PB6	78	157+04,60'RT NO WORK														
PB7	78	158+64,91'LT						1								
PB8	78	158+41,60'LT								1						
PB9	78	157+65,80'LT NO WORK														
	78	157+53, 78'LT PB1 157+65.5, 88'LT P2	15		15											
	78	157+53, 78'LT PB1 158+63, 104'LT PB3				112										
	78	157+65,80'LT PB9 158+64,91'LT PB7					100									
	78	158+63, 104'LT PB3 158+20, 74'RT PB4				183										
	78	158+68,91'LT PB7 156+26,77'RT PB5					173									
	78	158+63, 104'LT PB3 158+91, 77'LT P6		38	38											
	78	157+42, 62'LT P1 157+42, 62'LT DPL													430	
	78	CONT W3												66		
	78	W3 W4												44		
	78	CONT B1											48			
	78	CONT N4												66		
	78	N4 N3												24		
	78	CONT N2												108		
	78	N2 N1												33		
	78	CONT PS2												181		
	78	CONT B2														
	78	CONT E1												374		
	78	CONT E3												401		
	78	CONT C5														1
	78	CONT C6														1
	78	CONT C4														1
	78	CONT LN4									529	1				
	78	CONT PS4												446		
	78	CONT PS3												336		
TOTALS CARRIED TO GENERAL SUMMARY			15	38	53	773	273	1	1	3	529	1	48	5579	430	3

CALCULATED LAS CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

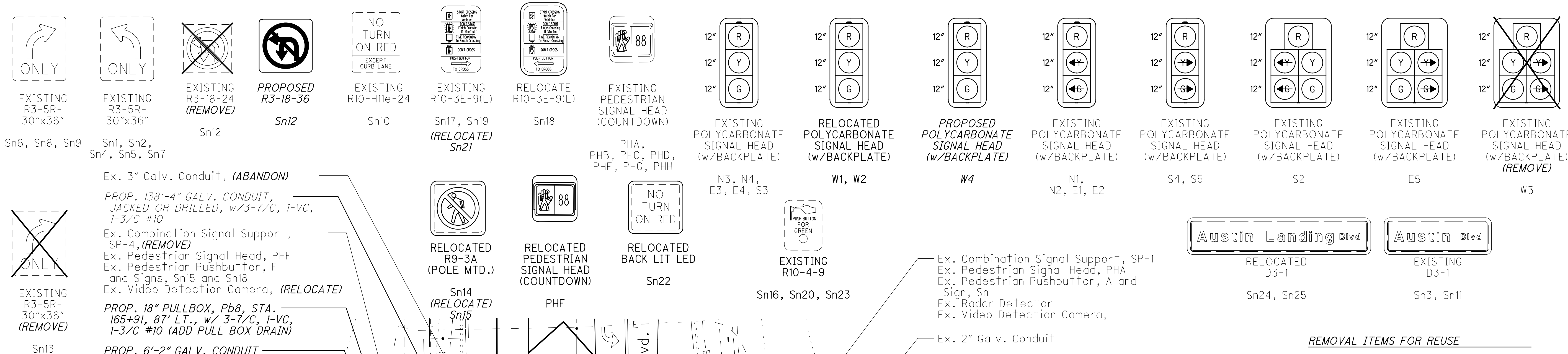
MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			630 SIGN HANGER ASSEMBLY, MAST ARM EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT		630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH
			TO								
SN2	78	P2			1					1	
SN3	78	P6				1					1
SN6	78	P2			1					1	
SN7	78	P2			1					1	
SN10	78	P2			1					1	
SN11	78	P2				1					3
SN12	78	P6				1					1
SN13	78	P1				1					1
SN14	78	158+11					2.25	14			
SN15	78						2.25				
SN16	78	P1			1		12				
TOTALS CARRIED TO GENERAL SUMMARY					5	4	17	14		4	6

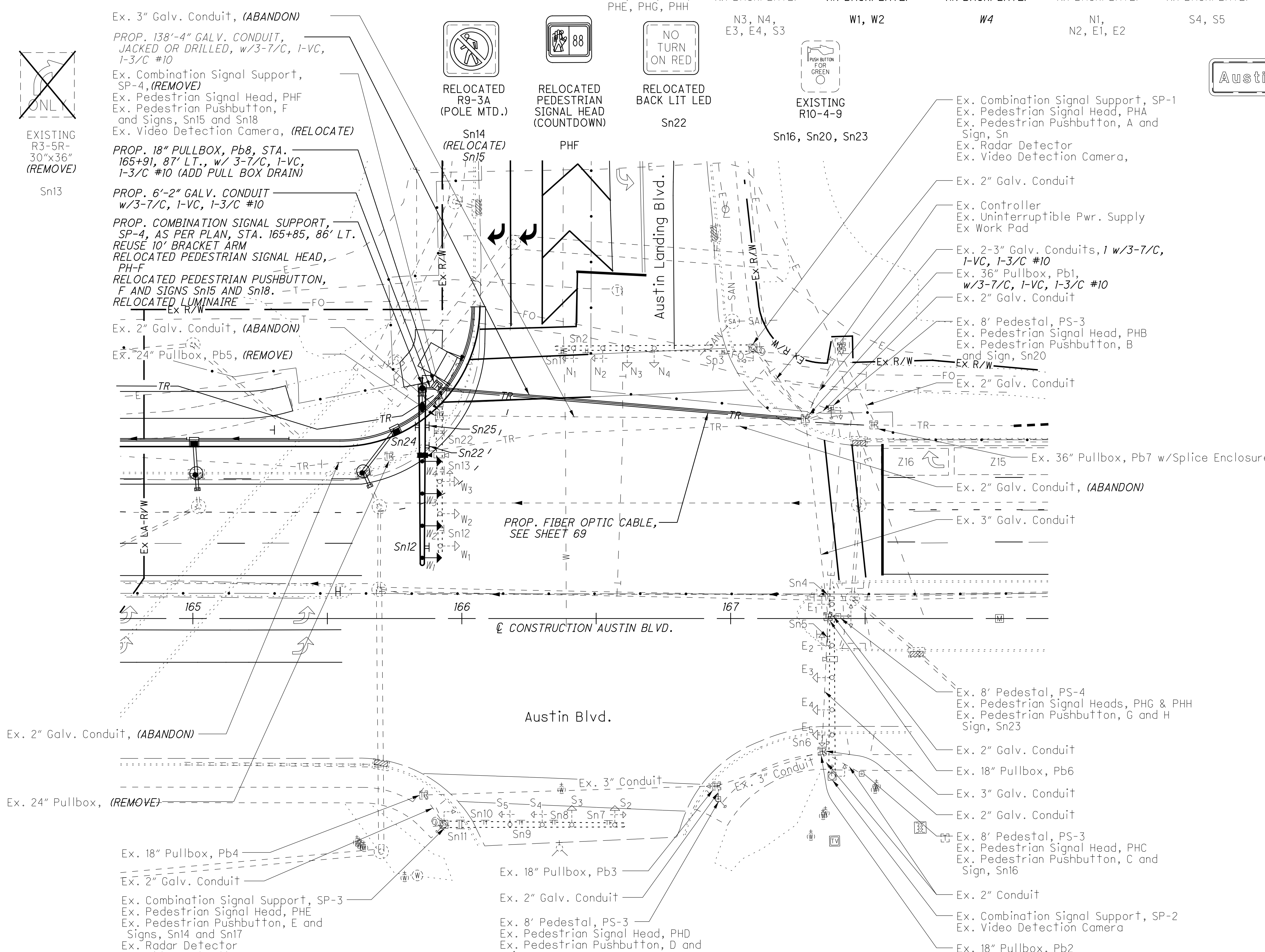
CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

MOT-75-0.76



ONLY
EXISTING R3-5R- 30"x36"
Sn6, Sn8, Sn9
ONLY
EXISTING R3-5R- 30"x36"
Sn1, Sn2, Sn4, Sn5, Sn7
EXISTING R3-18-24 (REMOVE)
Sn12
PROPOSED R3-18-36
Sn12
NO TURN ON RED EXCEPT CURB LANE
EXISTING R10-H11e-24
Sn10
EXISTING R10-3E-9(L)
Sn17, Sn19 (RELOCATE) Sn21
RELOCATE R10-3E-9(L)
Sn18
88
EXISTING PEDESTRIAN SIGNAL HEAD (COUNTDOWN)
PHA, PHB, PHC, PHD, PHE, PHG, PHH
12" R 12" Y 12" G
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
N3, N4, E3, E4, S3
RELOCATED POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
W1, W2
PROPOSED POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
W4
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
N1, N2, E1, E2
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
S4, S5
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
S2
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE)
E5
EXISTING POLYCARBONATE SIGNAL HEAD (w/BACKPLATE) (REMOVE)
W3
ONLY
EXISTING R3-5R- 30"x36" (REMOVE)
Sn13
RELOCATED R9-3A (POLE MTD.)
Sn14 (RELOCATE) Sn15
88
RELOCATED PEDESTRIAN SIGNAL HEAD (COUNTDOWN)
PHF
NO TURN ON RED
RELOCATED BACK LIT LED
Sn22
PUSH BUTTON FOR GREEN
EXISTING R10-4-9
Sn16, Sn20, Sn23
Austin Landing Blvd
RELOCATED D3-1
Sn24, Sn25
Austin Blvd
EXISTING D3-1
Sn3, Sn11



Ex. 3" Galv. Conduit, (ABANDON)
PROP. 138'-4" GALV. CONDUIT, JACKED OR DRILLED, w/3-7/C, 1-VC, 1-3/C #10
Ex. Combination Signal Support, SP-4, (REMOVE)
Ex. Pedestrian Signal Head, PHF
Ex. Pedestrian Pushbutton, F and Signs, Sn15 and Sn18
Ex. Video Detection Camera, (RELOCATE)
PROP. 18" PULLBOX, Pb8, STA. 165+91, 87' LT., w/ 3-7/C, 1-VC, 1-3/C #10 (ADD PULL BOX DRAIN)
PROP. 6'-2" GALV. CONDUIT w/3-7/C, 1-VC, 1-3/C #10
PROP. COMBINATION SIGNAL SUPPORT, SP-4, AS PER PLAN, STA. 165+85, 86' LT.
REUSE 10' BRACKET ARM
RELOCATED PEDESTRIAN SIGNAL HEAD, PH-F
RELOCATED PEDESTRIAN PUSHBUTTON, F AND SIGNS Sn15 AND Sn18.
RELOCATED LUMINAIRE
Ex R/W
Ex. 2" Galv. Conduit, (ABANDON)
Ex. 24" Pullbox, Pb5, (REMOVE)
Ex. Combination Signal Support, SP-1
Ex. Pedestrian Signal Head, PHA
Ex. Pedestrian Pushbutton, A and Sign, Sn
Ex. Radar Detector
Ex. Video Detection Camera,
Ex. 2" Galv. Conduit
Ex. Controller
Ex. Uninterruptible Pwr. Supply
Ex Work Pad
Ex. 2-3" Galv. Conduits, 1 w/3-7/C, 1-VC, 1-3/C #10
Ex. 36" Pullbox, Pb1, w/3-7/C, 1-VC, 1-3/C #10
Ex. 2" Galv. Conduit
Ex. 8' Pedestal, PS-3
Ex. Pedestrian Signal Head, PHB
Ex. Pedestrian Pushbutton, B and Sign, Sn20
Ex. 2" Galv. Conduit
Ex. 36" Pullbox, Pb7 w/Splice Enclosure
Ex. 2" Galv. Conduit, (ABANDON)
Ex. 3" Galv. Conduit
Austin Landing Blvd.
Ex R/W
Sn2
Sn1
Sn3
N1 N2 N3 N4
Sn25
Sn24
Sn22
Sn13
W3 W2 W1
Sn12
Z16
Z15
PROP. FIBER OPTIC CABLE, SEE SHEET 69
Ex LA-R/W
165
166
167
℄ CONSTRUCTION AUSTIN BLVD.
Sn4
E1 E2 E3 E4 E5
Sn5
Sn6
Austin Blvd.
Ex. 2" Galv. Conduit, (ABANDON)
Ex. 24" Pullbox, (REMOVE)
Ex. 3" Conduit
S5 S4 S3 S2
Sn10 Sn8 Sn7
Sn11 Sn9
Ex. 18" Pullbox, Pb4
Ex. 2" Galv. Conduit
Ex. Combination Signal Support, SP-3
Ex. Pedestrian Signal Head, PHE
Ex. Pedestrian Pushbutton, E and Signs, Sn14 and Sn17
Ex. Radar Detector
Ex. Video Detection Camera
Ex. 18" Pullbox, Pb3
Ex. 2" Galv. Conduit
Ex. 8' Pedestal, PS-3
Ex. Pedestrian Signal Head, PHD
Ex. Pedestrian Pushbutton, D and Sign, Sn21
Ex. 8' Pedestal, PS-4
Ex. Pedestrian Signal Heads, PHG & PHH
Ex. Pedestrian Pushbutton, G and H Sign, Sn23
Ex. 2" Galv. Conduit
Ex. 18" Pullbox, Pb6
Ex. 3" Galv. Conduit
Ex. 2" Galv. Conduit
Ex. 8' Pedestal, PS-3
Ex. Pedestrian Signal Head, PHC
Ex. Pedestrian Pushbutton, C and Sign, Sn16
Ex. 2" Conduit
Ex. Combination Signal Support, SP-2
Ex. Video Detection Camera
Ex. 18" Pullbox, Pb2

REMOVAL ITEMS FOR REUSE

VEHICULAR SIGNAL HEAD..................2
PEDESTRIAN SIGNAL HEAD.................1
PEDESTRIAN PUSHBUTTON..................1
LED BLACK-OUT SIGN.....................1
LUMINAIRE..............................1
VIDEO DETECTION CAMERA.................1
SIGNS..................................4
BRACKET ARM............................1

REMOVAL ITEMS FOR DISPOSAL

SIGNAL SUPPORT.........................1
FOUNDATION.............................1
PULLBOX................................2
SIGN...................................1
VEHICLE SIGNAL HEAD....................1

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
DILEMMA ZONE RADAR DETECTION UNIT		
STOP BAR RADAR DETECTION UNIT		
DETECTION ZONE		

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL PLAN
AUSTIN BLVD AND AUSTIN LANDING BLVD

MOT-75-0.76

SIGNAL TIMING CHART

INTERSECTION: Austin Blvd & Austin Landing Way
MAINTAINING AGENCY: Montgomery County Engineer

START UP
START IN: ALL RED
TIME FOR FLASH OR ALL RED: 7
FIRST PHASE(S): 2 + 6
COLOR DISPLAYED: GREEN

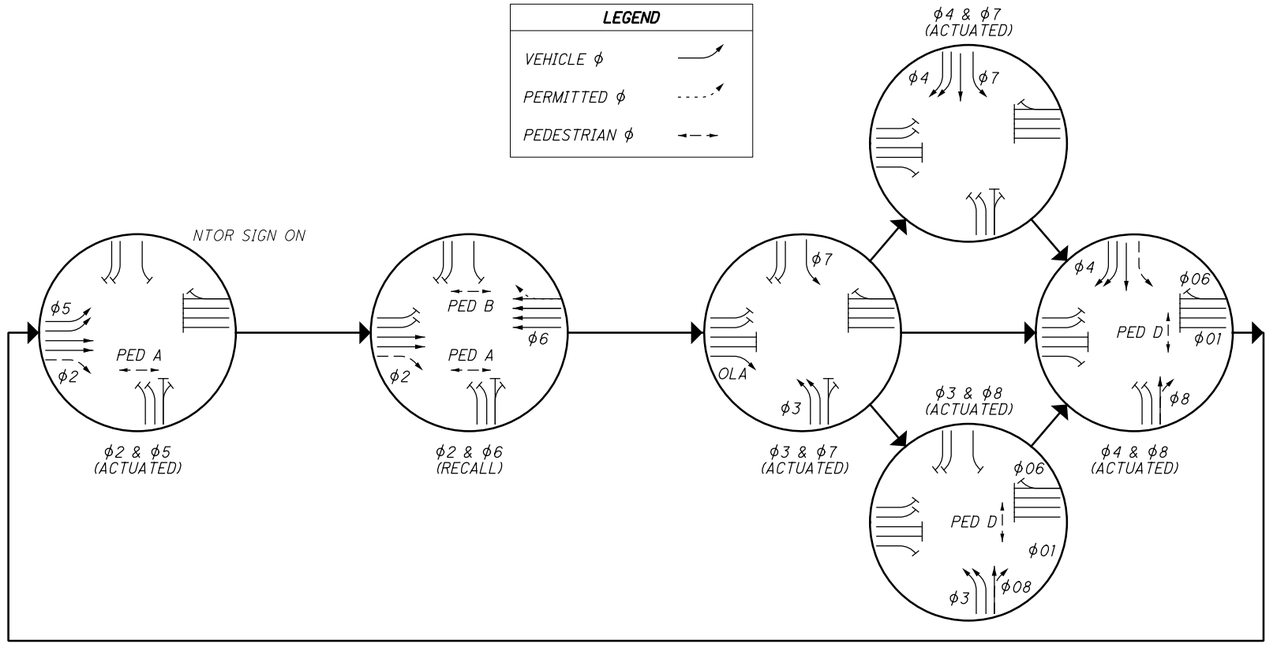
DUAL ENTRY: YES | PHASES: -
REST IN RED: | RING 1 - | RING 2 -

OVERLAP	A	B	C	D
PHASES	-	-	-	-

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	EB	NB LT	SB	EB LT	WB	SB LT	NB
MINIMUM GREEN (INITIAL)	(SEC.)	-	15	8	12	8	15	8	12
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	-	3	3	3	3	3	3	3
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	-	40	20	20	20	40	20	20
MAXIMUM GREEN II	(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE	(SEC.)	-	4.3	3	5.1	4	4.3	3	5.1
ALL RED CLEARANCE	(SEC.)	-	2	1	2	2	2	1	2
WALK	(SEC.)	-	7	-	-	-	7	-	4
PEDESTRIAN CLEARANCE	(SEC.)	-	26	-	-	-	26	-	10
RECALL	MAXIMUM (ON/OFF)	-	ON	OFF	OFF	OFF	ON	OFF	OFF
	MINIMUM (ON/OFF)	-	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	PEDESTRIAN (ON/OFF)	-	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY	(ON/OFF)	-	OFF	OFF	OFF	OFF	OFF	OFF	OFF

*VOLUME DENSITY CONTROLS
*PHASE 8 PED IS A TWO STAGE CROSSING

PHASING DIAGRAM



PULL BOX CHART

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	167+30	LT	76	EX 24
PB2	167+32	RT	45	EX 18
PB3	166+95	RT	63	EX 18
PB4	165+86	RT	65	EX 18
PB5	165+89	LT	72	EX 24
PB6	167+32	LT	2	EX 18
PB7	167+53	LT	69	EX 36
PB8	165+91	LT	87	18

RADAR DETECTION CHART

LOOP DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY PROGRAMMED IN CONTROLLER (SEC.)	EXTENSION PROGRAMMED IN CONTROLLER (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.*
-	-	-	-	-	-	-	-	-
Z16	VIDEO	-	PRESENCE	15	-	-	6	-
Z15	VIDEO	-	PRESENCE	10	-	-	6	-
-	-	-	-	-	-	-	-	-
Z25	RADAR	-	PULSE	-	-	-	6	-
Z26	RADAR	-	PULSE	-	-	-	6	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

* FOR 332/336 CABINET

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

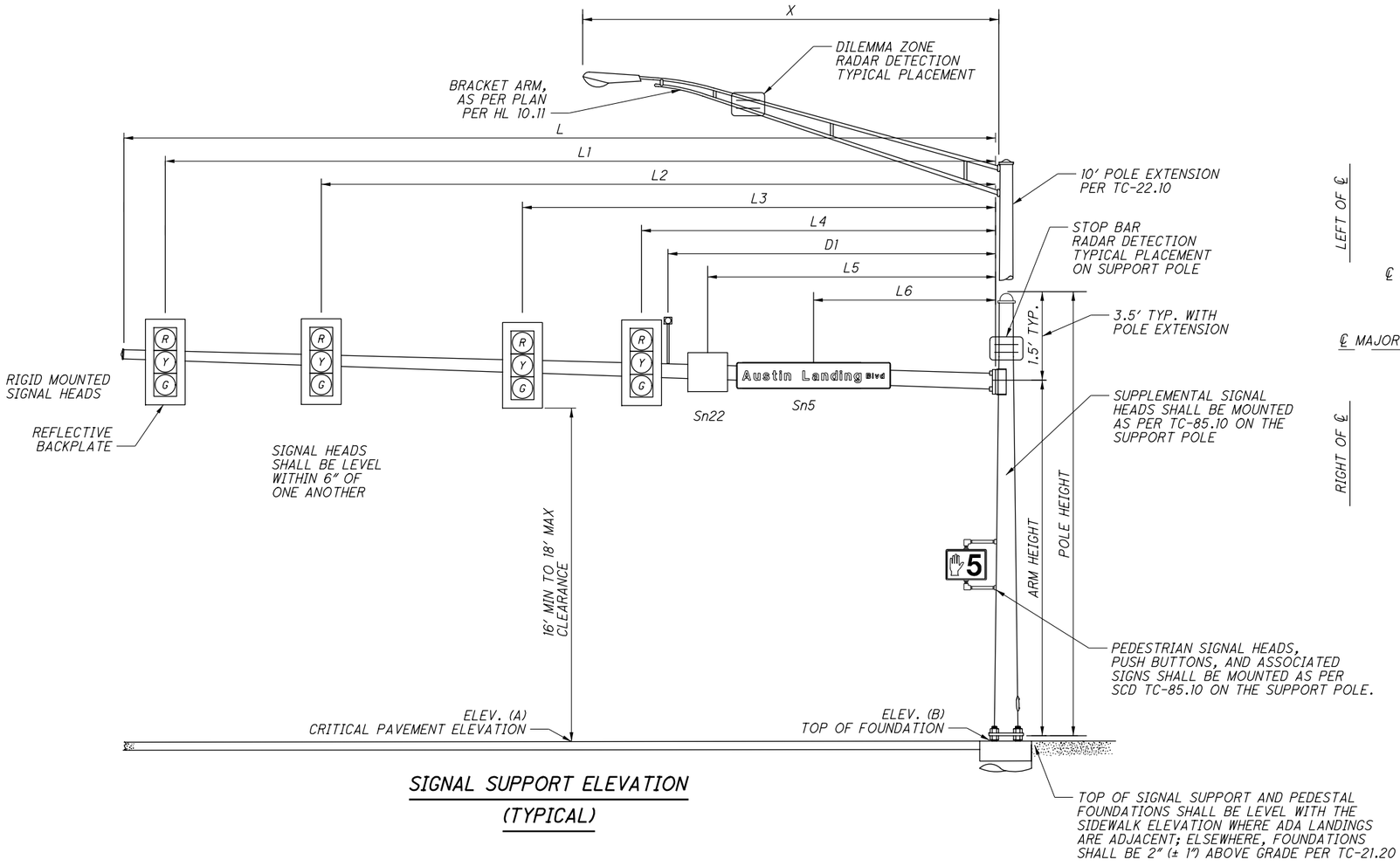
NOTES:

1. DETECTORS Z15 AND Z16 TO BE DISABLED, SEE SHEET 61.
2. DETECTOR Z25 TO BE EXPANDED TO NORTHERN MOST WESTBOUND LANE, NON-LOCK MODE, SEE SHEET 48.
3. DETECTOR Z26 NON LOCK MODE SEE SHEET 48.

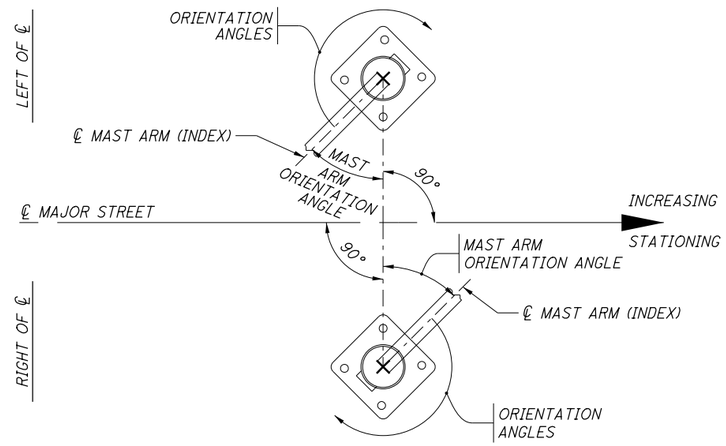
CALCULATED LAS | CHECKED PCG

TRAFFIC SIGNAL DETAILS
AUSTIN BLVD AND AUSTIN LANDING BLVD

MOT-75-0.76



SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

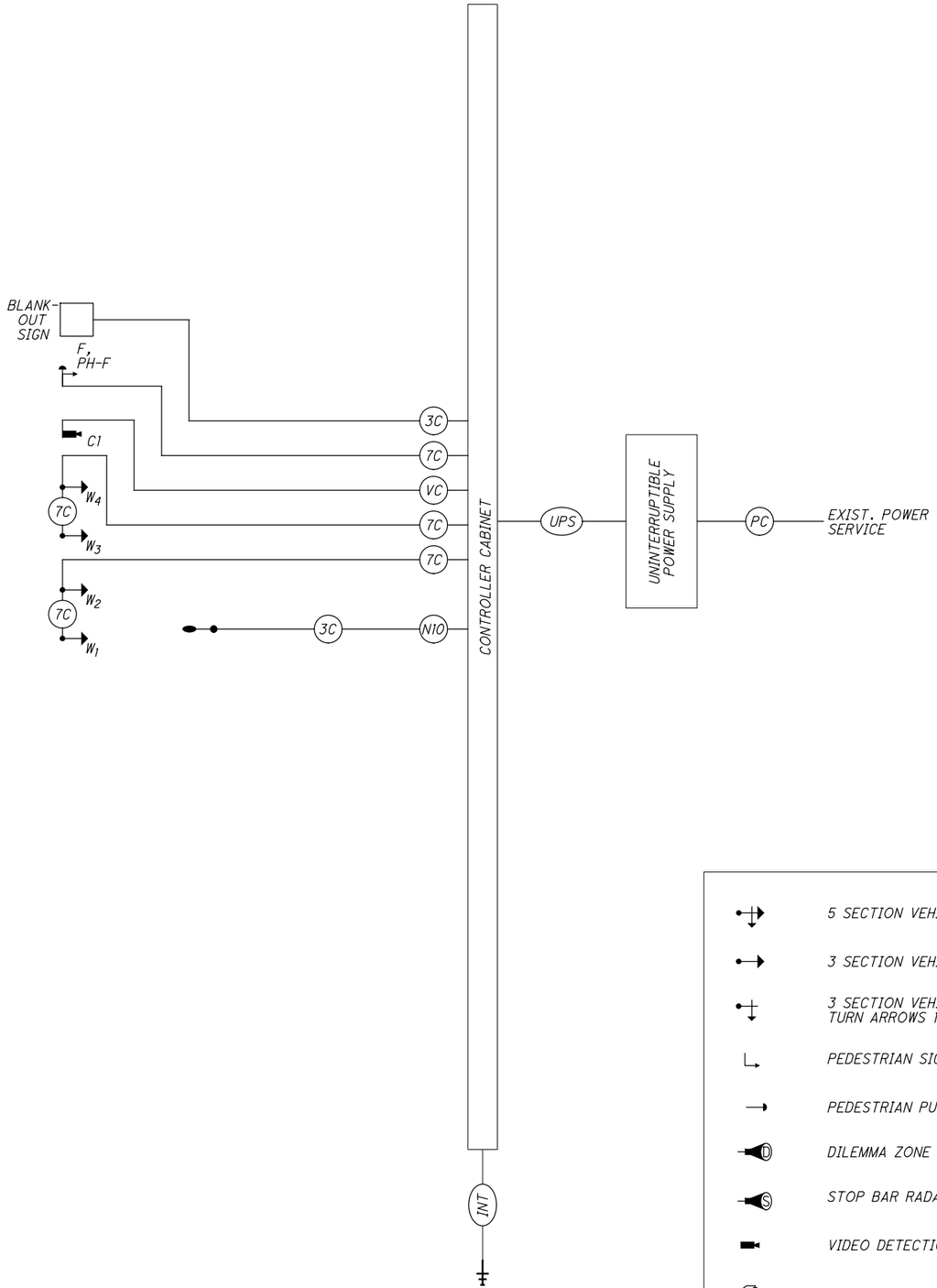
SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS														ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	D1	D2	X	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
							FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP-4	165+85	86' LT	921.63	922.30	TC-81.21	14	34	18.5	66	63	51	36	27	22	14	25	-	10	0	-	0	180	-	-	0	180	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL DETAILS
AUSTIN BLVD AND AUSTIN LANDING BLVD

MOT-75-0.76

WIRING DIAGRAM (TYPICAL)



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
N1 N2	R	EX P3 R	R	S3	R	EX P4 R	R
	<--Y---	EX P3 Y			Y	EX P4 Y	
(NB LT)	<--G---	EX P3 G		(SB)	G	EX P4 G	
N3 N4	R	EX P8 R	R	S4 S5	R	EX OLA R	R
	Y	EX P8 Y			---Y-->	EX OLA Y	
(NB)	G	EX P8 G		(SB RT)	---G-->	EX OLA G	
E1 E2	R	EX P5 R	Y	W1 W2 W3 W4	R	EX P6 R	Y
(EB LT)	<--Y---	EX P5 Y			Y	EX P6 Y	
	<--G---	EX P5 G		(WB)	G	EX P6 G	
E3 E4	R	EX P2 R	Y		-	EX P5 G	-
	Y	EX P2 Y		NTOR SIGN	-	-	
(EB)	G	EX P2 G			-	-	
E5	R	EX P2 R	Y		-	-	
	Y	EX P2 Y		-	-	-	
	G	EX P2 G		PEDESTRIAN MOVEMENTS			
(EB RT)	---Y-->	EX P3 Y		PHA-F	DW	EX P6 DW	OUT
	---G-->	EX P3 G		NORTH	W	EX P6 W	
S2	R	EX P4 R	R	PHBGHC	DW	EX P8 DW	OUT
	Y	EX P4 Y		EAST	W	EX P8 W	
	G	EX P4 G		PHD-E	DW	EX P2 DW	OUT
(SB)	<--Y---	EX P7 Y		SOUTH	W	EX P2 W	
	<--G---	EX P7 G		-	-	-	-
LS = LOAD SWITCH				-	-	-	

LEGEND

- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP BAR RADAR DETECTION UNIT
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- ETHERNET RADIO
- LUMINAIRE, CONVENTIONAL, 150 WATT, HPS, 120 VOLT, AS PER PLAN
- (LIC) 2/C NO. XX AWG (LEAD-IN CABLE)
- (L) VEHICLE LOOP DETECTOR
- (5C) SIGNAL CABLE, 5 CONDUCTOR, NO. XX AWG
- (7C) SIGNAL CABLE, 7 CONDUCTOR, NO. XX AWG
- (RC) RADAR DETECTION CABLE
- (VC) VIDEO CAMERA CABLE
- (INT) INTERCONNECT CABLE
- (PE) PHOTOELECTRIC CELL
- POWER SOURCE
- (SC) SERVICE CABLE, 3 CONDUCTOR, NO. X AWG
- (PC) POWER CABLE, 2 CONDUCTOR, NO. X AWG
- (SP 1) SIGNAL SUPPORT POLE NO. __
- (MB) METER BASE
- (NX) NO. X AWG DISTRIBUTION CABLE
- (NXX) NO. XX AWG POLE & BRACKET CABLE
- (DS) DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
- (Sn) LIGHTED BLANKOUT SIGN
- (UPS) UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL DETAILS
AUSTIN BLVD AND AUSTIN LANDING BLVD

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION					632	632	632	632	632	632			632	625		632	632	632		633		
							REUSE OF PEDESTRIAN PUSHBUTTON	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD	REUSE OF PEDESTRIAN SIGNAL HEAD	SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH)	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN			SIGNAL SUPPORT FOUNDATION	GROUND ROD		COVERING OF VEHICULAR SIGNAL HEAD	COVERING OF PEDESTRIAN SIGNAL HEAD	REMOVAL OF TRAFFIC SIGNAL INSTALLATION		CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS		
							EACH	EACH	EACH	EACH	EACH	EACH			EACH	EACH		EACH	EACH	EACH		EACH		
			TO																					
CONT																				1		1		
SP4	85	165+85, 86'LT									1	1			1	1								
W1	85	SP4							1									1						
W2	85	SP4							1									1						
W3	85	SP4						1										1						
W4	85	SP4						1										1						
PHF	85	SP4								1									1					
F	85	SP4					1																	
SN22	85	SP4																1						
TOTALS CARRIED TO GENERAL SUMMARY							1	2	2	1	1	1			1	1		5	1	1		1		

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

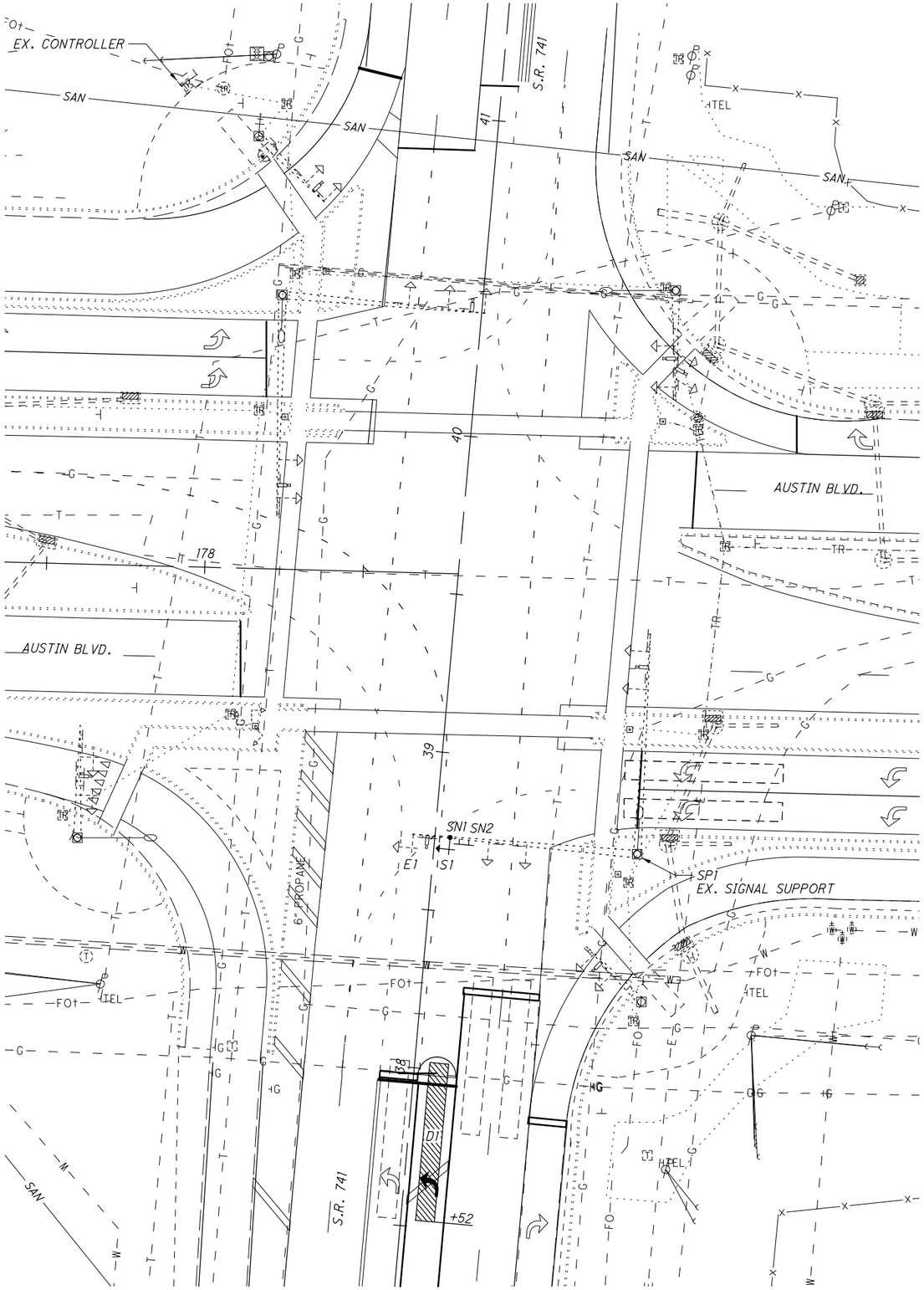
MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION				625 CONDUIT, 3", 725.05 FT	625 TRENCH FT	625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 4", 725.04 FT	625 REMOVAL OF LUMINAIRE AND REERECTION EACH	625 PULL BOX, 725.08, 18" EACH	625 REMOVE AND REERECT BRACKET ARM EACH	625 PULL BOX REMOVED EACH	632 SIGNAL CABLE, 3 CONDUCTOR, NO. 10 AWG FT	632 SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG FT	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG FT	816 VIDEO DETECTION SYSTEM, AS PER PLAN EACH	630 SIGN HANGER ASSEMBLY, MAST ARM EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH	631 SIGN LIGHTING MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH
			TO																				
		AUSTIN BLVD SIGNAL								1													
PB8	85	165+91,87'LT																					
PB5	85	165+89,72'LT										1											
	85	165+91,87'LT PB8		167+30,76'LT PB1				138															
	85	165+91,87'LT PB8		165+85,86'LT SP4		6	6																
	85	CONT		SP4 W2											262								
	85	W2		SP4 W1											22								
	85	CONT		SP4 W4											238								
	85	W4		SP4 W3											19								
	85	CONT		SP4 SN22										233									
	85	CONT		SP4 CAMERA												1							
	85	CONT		SP4 PHF											200								
	85	CONT		SP4 F																			
	85	CONT		SP4 LUMINAIRE					1		1		232										
SN12	85	SP4		R3-18-36													1		9	1			
SN13	85	SP4		REMOVE																1			
SN15	85	SP4		RELOCATE														1				1	
SN18	85	SP4		RELOCATE														1				1	
SN22	85	SP4		RELOCATE													1						1
SN24	85	SP4		RELOCATE													1				1		
SN25	85	SP4		RELOCATE													1				1		
TOTALS CARRIED TO GENERAL SUMMARY						6	6	138	1	1	1	1	232	233	741	1	4	2	9	2	2	2	1

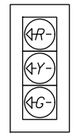
CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

MOT-75-0.76

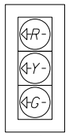


PROPOSED SIGNAL HEADS



S1

EXISTING SIGNAL HEADS



E1

PROPOSED SIGNS

SN1
R3-5L-30

SN2
R10-10L-24

NOTE: UNIMPACTED EXISTING SIGNS AND SIGNALS NOT DETAILED FOR CLARITY

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAT, 12" WITH ARROWS		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
PTZ CAMERA		
ETHERNET RADIO		
DETECTION ZONE		
SIGN		

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED NDE
CHECKED ADL

SIGNAL PLAN
S.R. 741 & AUSTIN BLVD.

MOT-75-0.76

91
106

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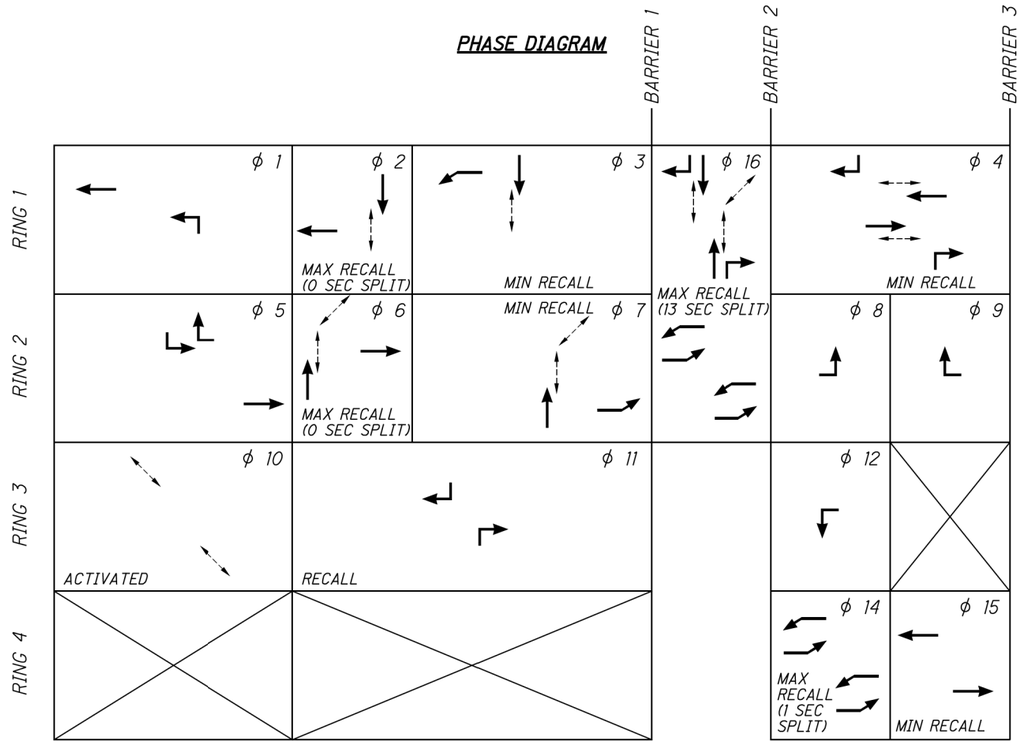
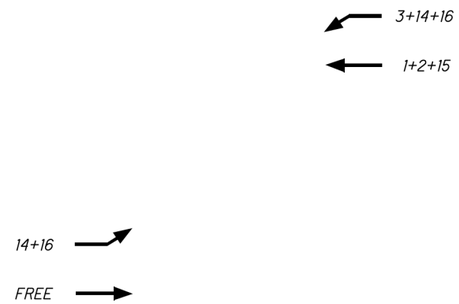
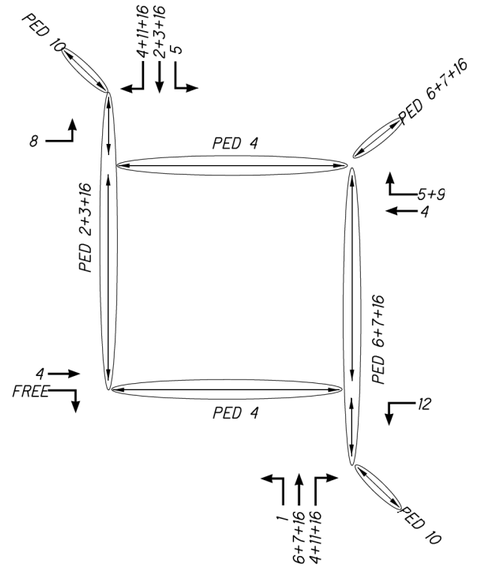
PHASE DIAGRAM



WEST



MAIN



EAST

N

CALCULATED NDE
CHECKED ADL

SIGNAL DETAILS - S.R. 741 & AUSTIN BLVD.

MOT-75-0.76

92
106

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018

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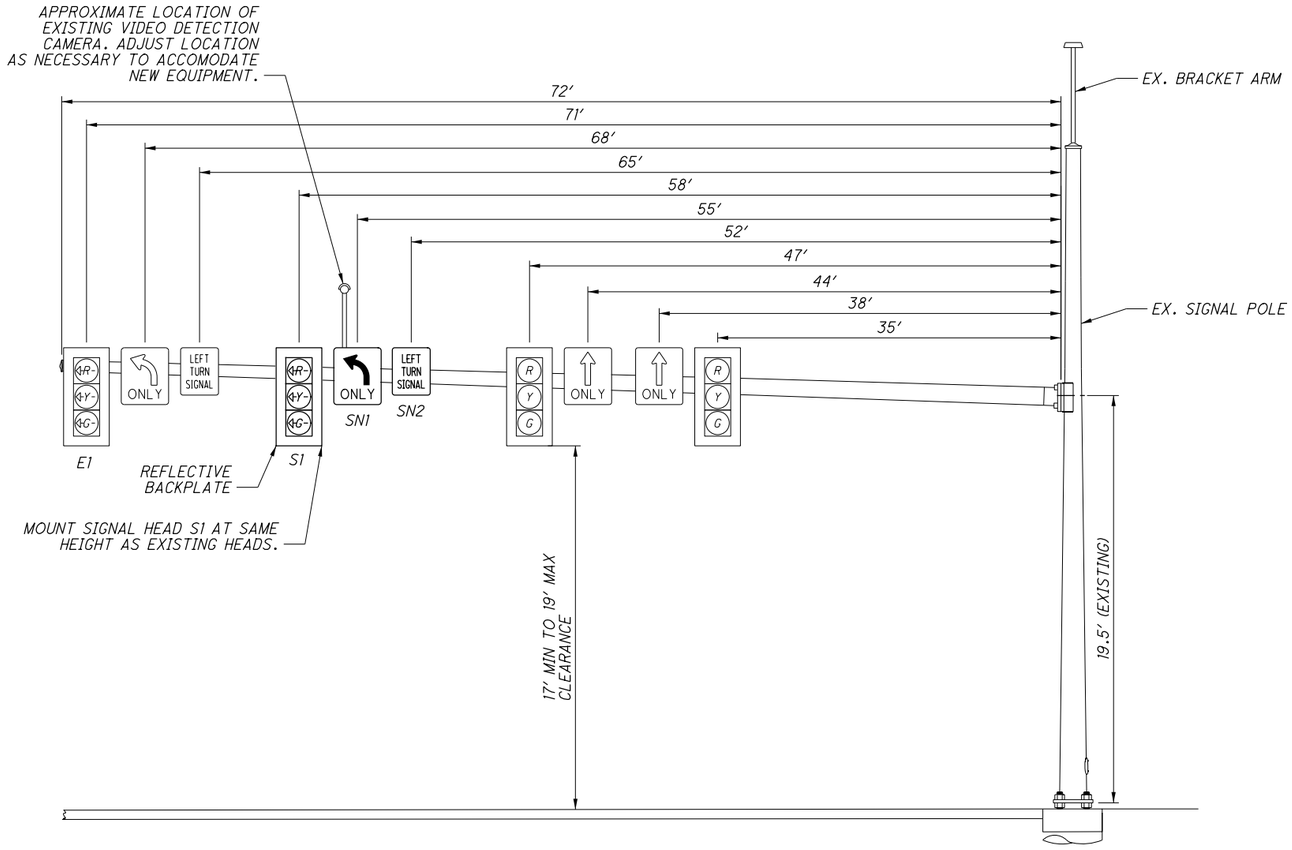
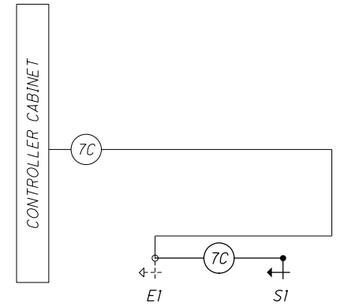


SIGNAL SUPPORT ELEVATION - SP1

NOT TO SCALE

EXISTING DIMENSIONS ARE APPROXIMATE AND MAY VARY FROM ACTUAL FIELD CONDITIONS

WIRING DIAGRAM



LEGEND

3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY

7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG

NOTE: UNIMPACTED WIRING NOT SHOWN FOR CLARITY.

VIDEO DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D1	NB LT	PRESENCE	1	0	-	CALL/EXTEND PHASE 1	50

MAINTAIN ALL OTHER EXISTING DETECTION

ENGINEERS SEAL:

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PROFESSIONAL ENGINEER

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DATE: 10/23/2018

CALCULATED NDE
CHECKED ADL

SIGNAL DETAILS - S.R. 741 & AUSTIN BLVD.

MOT-75-0.76

COORDINATION TIMING CHART

	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN PERCENT								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	WB L	EB	-	-	-	WB	-	SB	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & I-75 SB RAMP																		
4/3/1 (AM)	33	48				81		69									150	85	
4/4/1 (PM)	38	40				78		72									150	41	

	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	-	EB	-	NB	EB L	WB	WB PED	-	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & I-75 NB RAMP																		
4/3/1 (AM)	-	105	-	45	20	42	43	-	-	-	-	-	-	-	-	-	150	33	-
4/4/1 (PM)	-	104	-	46	15	46	43	-	-	-	-	-	-	-	-	-	150	119	-

	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	-	EB	NB L	SB	EB L	WB	SB L	NB	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & AUSTIN LANDING																		
4/3/1 (AM)	-	111	17	22	47	64	14	25	-	-	-	-	-	-	-	-	150	61	-
4/4/1 (PM)	-	103	25	22	41	52	22	25	-	-	-	-	-	-	-	-	150	11	-

	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
DIRECTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & SR 741																		
4/3/1 (AM)	52	14	11	60	14	51	12	50	10	10	67	60	-	12	48	13	150	0	-
4/4/1 (PM)	47	29	13	48	32	38	19	38	10	10	19	48	-	12	36	13	150	0	-

COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NO.	IMPLEMENTATION TIME	CYCLE LENGTH (SEC)
MON - SUN	2/4/1	0:00	120
MON - SUN	4/3/1 (AM)	6:45	150
MON - SUN	3/1/1	8:00	120
MON - SUN	4/4/1 (PM)	15:00	150
MON - SUN	3/1/1	19:00	120

NOTE: ODOT TO PROVIDE OFF-PEAK COORDINATED TIMING PLANS (2/4/1 & 3/1/1)

CALCULATED ADL
CHECKED NDE

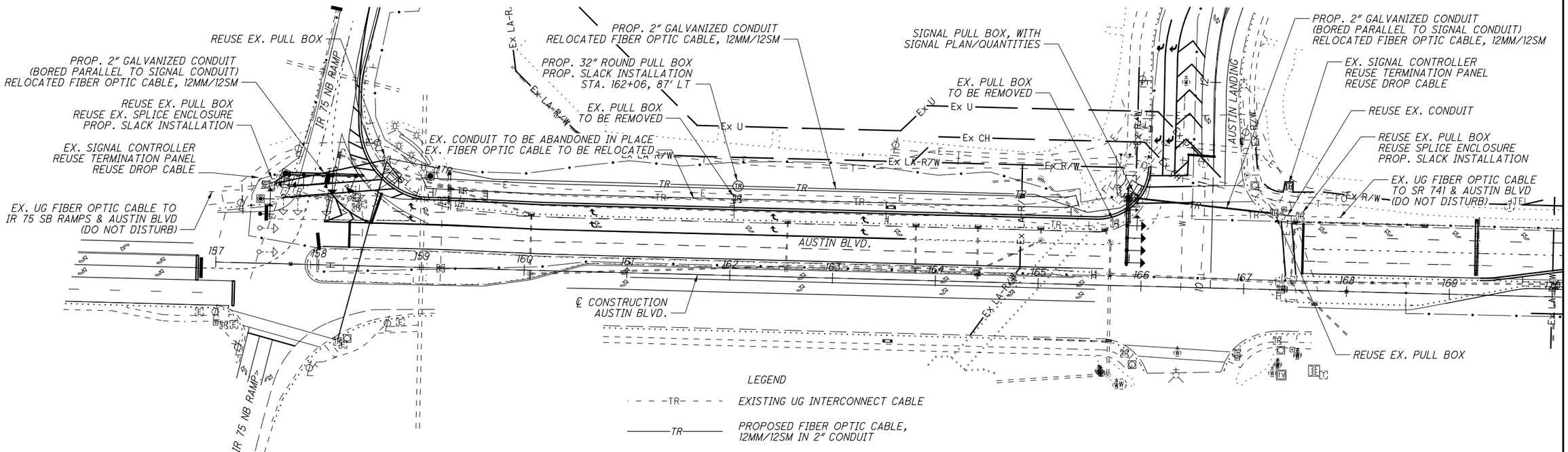
SIGNAL COORDINATION PLAN

MOT-75-0.76

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN 68714
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Aaron Littman
DATE: 10/23/2018



NOTES:

1. UNLESS OTHERWISE NOTED, EXISTING SPLICE ENCLOSURES, DROP CABLES, AND TERMINATION PANELS SHALL BE REUSED.

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED
PROFESSIONAL ENGINEER

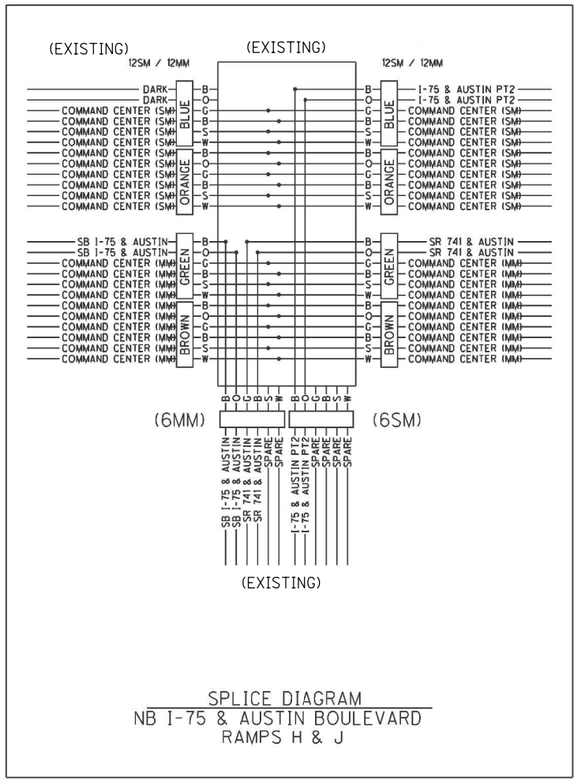
SIGNED: Aaron Littman
DATE: 10/23/2018

HORIZONTAL SCALE IN FEET
0 25 50 100

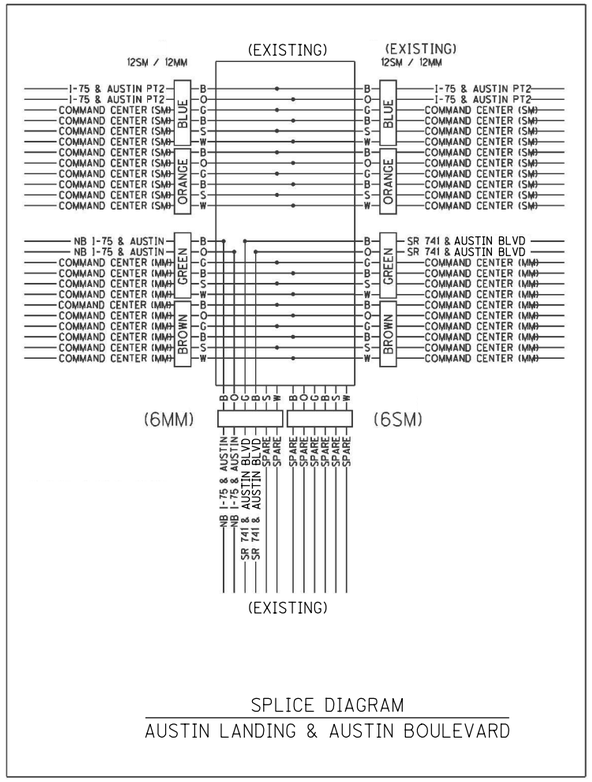
CALCULATED NDE
CHECKED ADL

SIGNAL INTERCONNECT PLAN AUSTIN BLVD.

MOT-75-0.76



SPLICE DIAGRAM
NB I-75 & AUSTIN BOULEVARD
RAMPS H & J

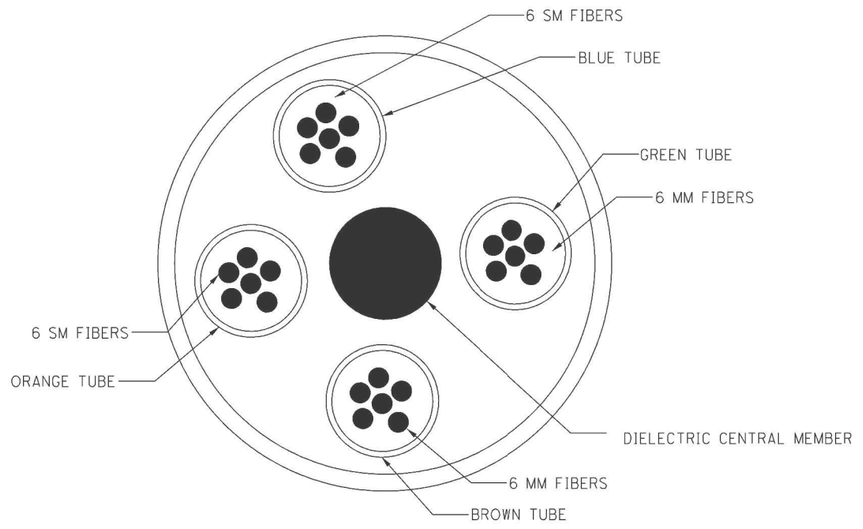


SPLICE DIAGRAM
AUSTIN LANDING & AUSTIN BOULEVARD

LEGEND

- INDICATES TUBE COLOR
- INDICATES PROPOSED SPLICE (OR EXISTING SPLICE THAT MAY BE MAINTAINED IF CONSTRUCTION PERMITS)
- INDICATES POSSIBLE THROUGH SPLICE
- INDICATES EXISTING SPLICE

24 FIBER - HYBRID (12 MM/12 SM)



NOTES:

1) Cable construction shall be per and accepted by the rural utility service (RUS).
2) Tubes containg fibers shall be distinguished from each other by color coding. The tubes within each cable shall be colored blue, orange, and green.
3) Fibers within each tube shall be dinstinguishable from each other by color coding. Fibers within each tube shall be colored blue, orange, green, brown, slate, and white.
4) Filler tubes may be provided at the option of the cable manufacturer.

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CALCULATED NDE
CHECKED ADL

DIAGRAMS & CABLE CONSTRUCTION

SPLICE DIAGRAMS

MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			625 CONDUIT, 2", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 2" FT	625 TRENCH FT	625 PULL BOX, 725.08, 32", AS PER PLAN EACH	625 PULL BOX REMOVED EACH	630 SIGN ATTACHMENT ASSEMBLY, MAST ARM EACH	630 SIGN, FLAT SHEET SF		632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN EACH	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG FT	632 REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION SYSTEM EACH	632 REUSE OF TRAFFIC CONTROL ITEM: SPLICE ENCLOSURE EACH	632 REUSE OF TRAFFIC CONTROL ITEM: DROP CABLE EACH	632 REUSE OF TRAFFIC CONTROL ITEM: TERMINATION PANEL EACH	804 FIBER OPTIC CABLE, 24 FIBER FT	804 FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE EACH	804 FIBER OPTIC CABLE TESTING, AS PER PLAN				
			TO																							
-	91	38+75								2	15		1	25	1											
-	95	157+40		167+54	730	245	730	1	2							2	2	2	1150	1	LS					
TOTALS CARRIED TO GENERAL SUMMARY					730	245	730	1	2	2	15		1	25	1	2	2	2	1150	1	LS					

CALCULATED LAS
CHECKED PCG

TRAFFIC SIGNAL SUBSUMMARY

MOT-75-0.76

96A
106

GENERAL

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 202, 625 AND 725 OF THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.

625, CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX," OSRAM SYLVANIA "LUMALUX," PHILIPS "CERAMALUX," OR EQUAL APPROVED BY THE ENGINEER.

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

RECONNECTION OF EXISTING LIGHTING
625, PULL BOX, 725.08, 18", AS PER PLAN

THE PROPOSED PULL BOX LOCATED AT STA. 159+19, 72' LT IS INTENDED FOR THE RECONNECTION OF THE EXISTING LIGHTING. THE CONTRACTOR SHALL MAKE CONNECTION TO THE EXISTING WIRING USING ITEM 625 CONNECTION, UNFUSED PERMANENT. THE EXISTING WIRING IS NO. 8 AND NO. 10 AWG COPPER WIRE. THE EXISTING CIRCUITS ARE 120 / 240 VOLTS.

RECONNECTION OF EXISTING DECORATIVE LIGHTING

THE EXISTING DECORATIVE LIGHT POLE AT STA. 159+32, 72' LT. WILL BE REMOVED FROM THE EXISTING LIGHTING CIRCUIT AND REINSTALLED AS PART OF THE PROPOSED DECORATIVE LIGHTING CIRCUIT.

REMOVAL OF EXISTING LIGHTING

REMOVE EXISTING THE DECORATIVE LUMINAIRE AND BRACKET ARM ON THE SIGNAL SUPPORT AT STA. 158+34, 66.5' LT. THE LUMINAIRE IS OWNED BY MIAMI TOWNSHIP AND IS THE RESPONSIBILITY OF THE CONTRACTOR TO DELIVER THE LUMINAIRE AND BRACKET ARM TO THE MIAMI TOWNSHIP PUBLIC WORKS DEPARTMENT:

10891 WOOD ROAD
MIAMISBURG, OHIO 45342
937-866-4661
7 AM - 3:30 PM

PAYMENT IS VIA THE SIGNAL PLANS.

625, LIGHT POLE FOUNDATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.10, LIGHT POLE FOUNDATIONS SHALL BE AS FOLLOWS:

-10" BOLT CIRCLE, 3.2" ANCHOR BOLT PROJECTION AND $\frac{3}{4}$" X 30" +4" ANCHOR BOLTS.

-FOUNDATIONS ARE TO BE 6' IN DEPTH AND 18" IN DIAMETER.

-FORM THE TOP OF THE FOUNDATION AS A CIRCLE.

-PROVIDE AT LEAST TWO CONDUIT ELLS (CAP UNUSED ELLS), SIZE ELLS AS PER THE PLANS.

-PROVIDE ONE ADDITIONAL 1" PVC CONDUIT ELL FOR IRRIGATION OF POLES.

-INCORPORATE EXISTING BREAKAWAY FITTINGS ON EXISTING POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM "625, LIGHT POLE FOUNDATION, AS PER PLAN" FOR EACH LIGHT POLE FOUNDATION WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED.

CALCULATED LAS
CHECKED PCG

LIGHTING GENERAL NOTES

MOT-75-0.76

SHEET NUM.	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
99							
						LIGHTING	
3		625	00450	3	EACH	CONNECTION, FUSED PULL APART	
24		625	00480	24	EACH	CONNECTION, UNFUSED PERMANENT	
1		625	10600	1	EACH	LIGHT POLE ANCHOR L-BOLTS	
1		625	14501	1	EACH	LIGHT POLE FOUNDATION, AS PER PLAN	97
381		625	23304	381	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	
829		625	23306	829	FT	NO. 10 AWG 600 VOLT DISTRIBUTION CABLE	
28		625	25302	28	FT	CONDUIT, 1-1/2", 725.05	
10		625	25500	10	FT	CONDUIT, 3", 725.04	
245		625	25910	245	FT	CONDUIT CLEANED AND CABLES REMOVED	
1		625	27520	1	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
38		625	29000	38	FT	TRENCH	
1		625	30701	1	EACH	PULL BOX, 725.08, 18", AS PER PLAN	97
1		625	32000	1	EACH	GROUND ROD	
1		625	35010	1	EACH	REMOVE AND REERECT EXISTING LIGHT POLE	
1		625	75500	1	EACH	LIGHT POLE FOUNDATION REMOVED	
1		625	75800	1	EACH	DISCONNECT CIRCUIT	

CALCULATED LAS
CHECKED PCG

LIGHTING GENERAL SUMMARY

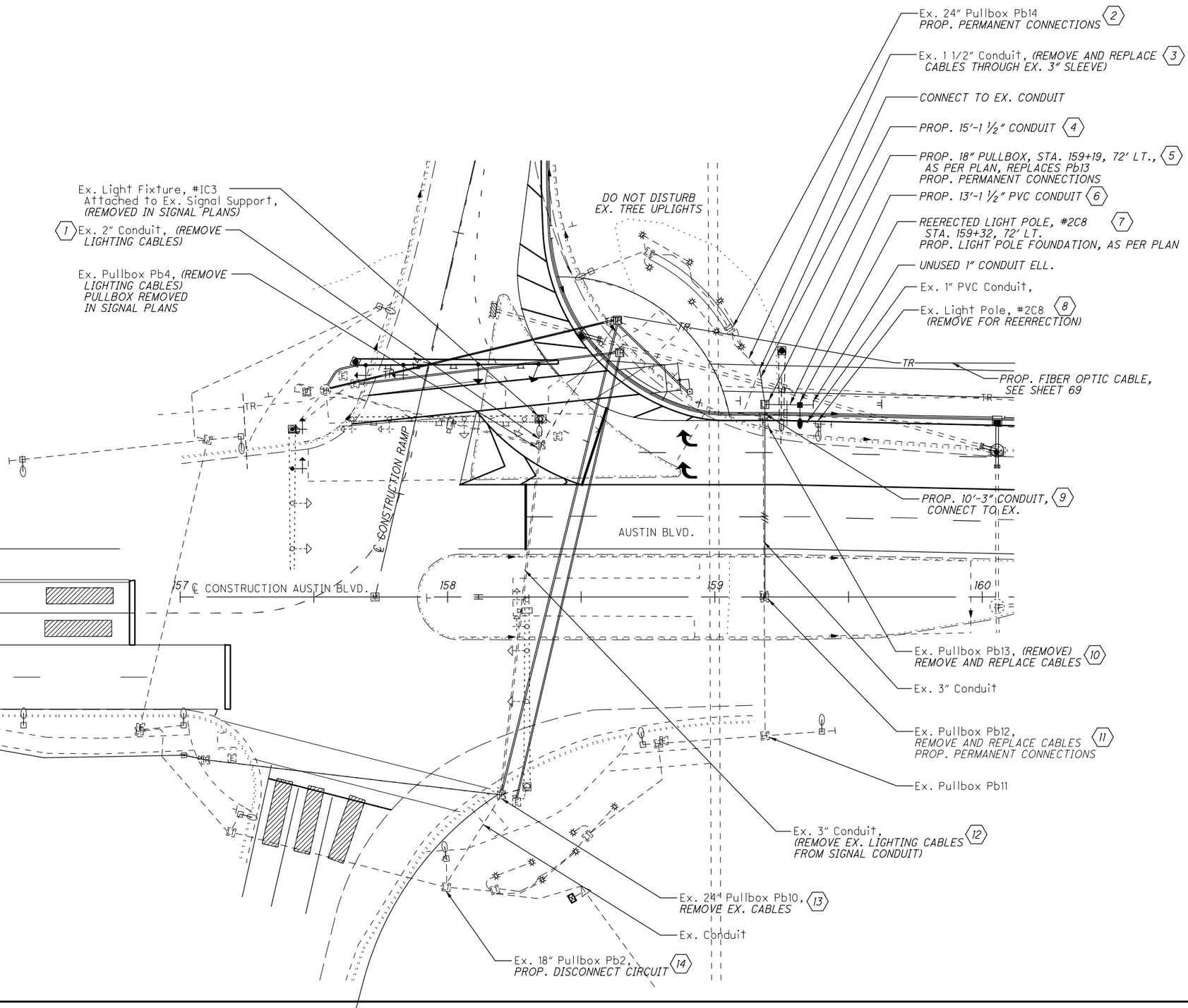
MOT-75-0.76

REF NO.	SHEET NO.	STATION TO STATION			625 PULL BOX, 725.08, 18", AS PER PLAN EACH	625 REMOVAL OF LUMINAIRE AND REERECTION EACH	625 LIGHT POLE FOUNDATION, AS PER PLAN EACH	625 REMOVE AND REERECT EXISTING LIGHT POLE EACH	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 CONNECTION, UNFUSED PERMANENT EACH	625 CONDUIT, 1-1/2", 725.05 FT	625 NO. 8 AWG 600 VOLT DISTRIBUTION CABLE FT	625 GROUND ROD EACH	625 NO. 10 AWG 600 VOLT DISTRIBUTION CABLE FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH FT	625 DISCONNECT CIRCUIT EACH	625 LIGHT POLE FOUNDATION REMOVED EACH	625 CONNECTION, FUSED PULL APART EACH	625 LIGHT POLE ANCHOR L-BOLTS EACH				
			TO																					
1	100	1C3		PB4					5															
2	100	PB14								7														
3	100	PB14		PB13								135		180										
4	100	PB13									15					15								
5	100	PB13			1					7														
6	100	PB13		2C8							13			75		13								
7	100	2C8					1						1						3	1				
8	100	2C8				1		1										1						
9	100	PB13													10	10								
10	100	PB13		PB12					68			246		574										
11	100	PB12								10														
12	100	PB10		PB4					132															
13	100	PB10		PB2					40								1							
14	100	PB2																						
TOTALS CARRIED TO GENERAL SUMMARY					1	1	1	1	245	24	28	381	1	829	10	38	1	1	3	1				

CALCULATED LAS
CHECKED PCG

LIGHTING SUBSUMMARY

MOT-75-0.76



N

0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED LAS
CHECKED PCG

LIGHTING PLAN
RAMP J AND AUSTIN BLVD.

MOT-75-0.76

100
106

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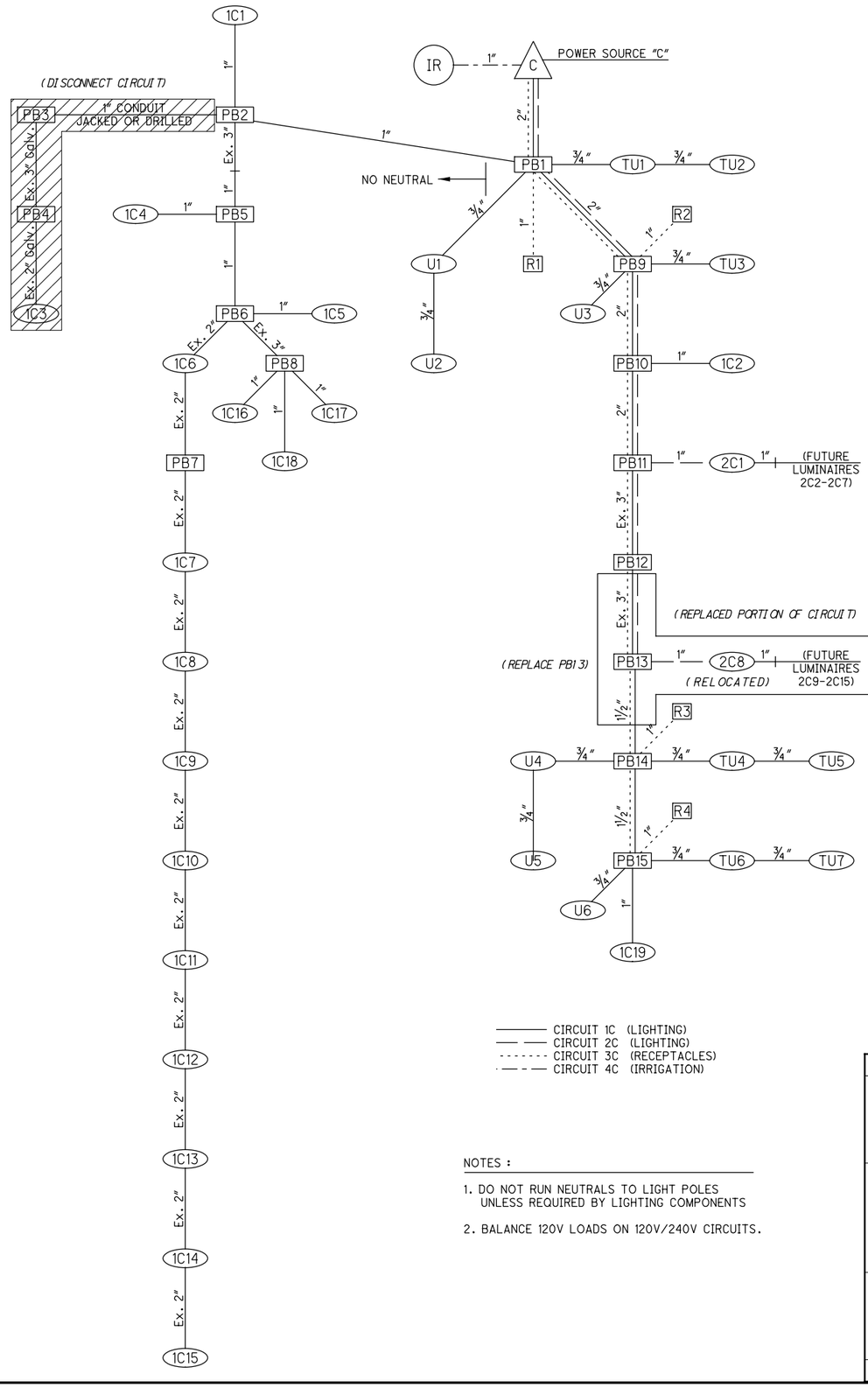


NOTES :

1. DO NOT RUN NEUTRALS TO LIGHT POLES UNLESS REQUIRED BY LIGHTING COMPONENTS
2. BALANCE 120V LOADS ON 120V/240V CIRCUITS.

CONTROL CENTER DATA

CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE-AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT VOLTS	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	CONTROL	MAINTAINING AGENCY
CCC STA. 158+51	120/240	16	3/0	150	1C (LTG)	240	32	40	4 #10	PHOTOCELL	MCTID
					2C (LTG)	240	14	20	3 #10	PHOTOCELL	
					3C (REC)	120	20	30	3 #8	ALWAYS ON	
					4C (IRR)	120	15	20	3 #12	ALWAYS ON	
											MCTID

NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE STANDARD DRAWINGS.

CALCULATED LAS
CHECKED PCG

LIGHTING CIRCUIT DIAGRAMS

MOT-75-0.76

101
106

GENERAL REQUIREMENTS

ALL PROPER PRECAUTIONS SO AS NOT TO DISTURB OR DAMAGE SUBSURFACE IMPROVEMENTS SHALL BE OBSERVED. THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTIONS SERVICE (OUPS) 48 HOURS PRIOR TO ANY EXCAVATION OR DIGGING TO ASSURE UNDERGROUND UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT SUCH UNDERGROUND UTILITIES. CONTRACTOR TO PROTECT RECENTLY POURED CONCRETE ON THIS PROJECT FROM MARKING PAINT.

SUBMITTALS:

CONTRACTOR TO PROVIDE DATA AND SAMPLES FOR VERIFICATION INCLUDING: PLANT MATERIAL SIZES, QUANTITIES AND SOURCE FOR PLANT MATERIAL, SEED MIX, FERTILIZERS, MULCH, HERBICIDES, AND PRE-EMERGENT INCLUDING PRODUCT LABEL AND MANUFACTURERS APPLICATION INSTRUCTIONS, MATERIAL TEST REPORTS FOR IMPORTED TOPSOIL AND PLANT WARRANTY. THE PLANTING CONTRACTOR SHALL PROTECT ALL IRRIGATION FACILITIES THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL CONDUCT WATERING OPERATIONS IN COMPLIANCE WITH ALL PROJECT SPECIFICATIONS AND SHALL PROTECT AGAINST WETTING OF THE PAVEMENT SURFACE.

IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN WHAT IS SHOWN ON THE DRAWING AND ACTUAL FIELD CONDITIONS, MIAMI TOWNSHIP SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION.

CMS ITEM 653: TOPSOIL FURNISHED AND PLACED

TOPSOIL PLACEMENT: THE CONTRACTOR SHALL PROVIDE AND PLACE ALL APPROVED AND IMPORTED TOPSOIL FOR ALL LANDSCAPED AREAS TO REQUIRED GRADES. CONTRACTOR TO SUBMIT DOCUMENTATION. TOPSOIL SHALL BE FREE OF JOHNSON GRASS. IT SHALL BE TAKEN FROM A WELL- DRAINED ARABLE SITE. IT SHALL BE REASONABLY FREE OF SUBSOIL, STONES, EARTH, CLODS, STICKS, ROOTS, OR OTHER OBJECTIONABLE EXTRANEOUS MATTER OR DEBRIS. IT SHALL CONTAIN NO TOXIC MATERIALS.

BEFORE PLACING TOPSOIL, REMOVED ROCK OR OTHER FOREIGN MATERIAL OF 3" OR GREATER IN ANY DIMENSION. APPROVED TOPSOIL SHALL BE PLACED ACCORDING TO THE DEPTH OF THE GIVEN PLANT'S ROOTBALL STRUCTURE. THE PREPARATION OF PLANTING AREAS MAY BEGIN PRIOR TO THE SPECIFIED PLANTING SEASON PROVIDED THE FINISHED GRADE HAS BEEN ESTABLISHED AND APPROVED BY THE ENGINEER, AND PROVIDED THAT IN THE JUDGEMENT OF THE OWNER, THE GENERAL CONSTRUCTION WORK IS SUFFICIENTLY ADVANCED. PLACING TOPSOIL ON ANY SLOPE TO BE PER ODOT ITEM 653 AND 659.05.

CMS ITEM 661.02: PLANT MATERIALS

ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661 AND THE FOLLOWING SPECIFICATIONS. ALL PLANT MATERIAL FURNISHED SHALL BE FULL, WELL BRANCHED, WELL PROPORTIONED, AND HAVE VIGOROUS, WELL DEVELOPED ROOT SYSTEM CAPABLE OF SUSTAINING VIGOROUS GROWTH. ALL TREES AND SHRUBS SHALL BE NO. 1 GRADE PLANTS WITH GROWTH AND BRANCHING HABIT TYPICAL OF THE SPECIES. NO PARK GRADE (NO. 2 OR 3 GRADE) PLANTS WILL BE ACCEPTED. ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM. ALL PLANT MATERIAL SHALL BE OF THE SIZE AND TYPE SPECIFIED. IF SUBSTITUTIONS ARE REQUIRED, ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.

CMS ITEM 661.04: TRANSPORTATION, STORAGE, AND HANDLING

ALL TRANSPORTATION, STORAGE, AND HANDLING TO BE PER ODOT ITEM 661 AND THE FOLLOWING SPECS. THE CONTRACTOR MAY STORE PLANT MATERIALS AND EQUIPMENT WITHIN THE PROJECT LIMITS AT AN APPROVED LOCATION BY OBTAINING OFFICIAL PERMISSION OF THE ENGINEER. NO PEDESTRIAN OR VEHICULAR TRAFFIC MAY BE IMPEDED, NOR HAZARDOUS CONDITION CREATED AS A RESULT OF SUCH STORAGE. THE STORAGE OF ALL DUG PLANTS SHALL CONFORM TO ITEM 661 WHETHER WITHIN THE PROJECT LIMITS, ADJACENT THERETO, OR AT SOME OTHER LOCATIONS. THESE AREAS SHALL BE DESIGNATED PRIOR TO ACTUAL PLANT STORAGE AND SHALL BE OPEN TO INSPECTION UPON THE REQUEST OF THE ENGINEER.

CMS ITEM 661.06: ACCEPTANCE

ALL PLANTS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661.06 AND THE FOLLOWING. ALL PLANTS SHALL BE INSPECTED AND CERTIFIED IN COMPLIANCE WITH STATE AND FEDERAL LAW BY STATE NURSERY INSPECTOR.

CMS ITEM 661.07: SCHEDULING

DECIDUOUS PLANTS SHALL BE DUG AND PLANTED BETWEEN SEPT. 15 AND NOVEMBER 30 AND/OR BETWEEN MARCH 15 AND JUNE 1. EVERGREENS SHALL BE DUG AND PLANTED AFTER MARCH 15 AND BEFORE JUNE 1.

CMS ITEM 661.08: LAYOUT OF PLANT MATERIAL

ALL LAYOUT OF PLANT MATERIAL TO BE IN ACCORDANCE WITH ODOT ITEM 661.08 UNLESS OTHERWISE NOTED. LOCATIONS FOR PLANTS AND OUTLINES OF BED AREAS SHALL BE CLEARLY MARKED ON THE GROUND IN CONFORMATION WITH THE LANDSCAPE PLANS. MAJOR PLANT MATERIALS SHALL HAVE THEIR LOCATIONS STAKED PRIOR TO ANY EXCAVATION FOR APPROVAL BY MIAMI TOWNSHIP. LOCATIONS MAY BE REVISED BY RE-STAKING PRIOR TO ANY EXCAVATION. THE LOCATIONS OF THE PROPOSED TREES AND SHRUBS ARE APPROXIMATE AND MAY BE RE-ARRANGED AT THE DIRECTION OF THE ENGINEER WHEN OBSTRUCTIONS ARE ENCOUNTERED.

CMS ITEM 661.09: BACKFILL MIX

ALL PLANTS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661.09 UNLESS OTHERWISE NOTED. WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED APPROVED IMPORTED TOPSOIL. DO NOT USE ANY REMAINED EXCAVATED MATERIAL. PLANTING SOIL MIX: ASTM D 5268 TOPSOIL WITH PH RANGE OF 5.5 TO 7.5, A MINIMUM OF 4% ORGANIC MATERIAL CONTENT; FREE OF STONES 1" OR LARGER AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH. OBTAIN IMPORTED SOIL OR MANUFACTURED TOPSOIL FROM OFFSITE SOURCES. TOPSOIL TO BE FRIABLE AND HAVE SUFFICIENT STRUCTURE TO GIVE GOOD TILTH AND AERATION TO SUPPORT PLANT GROWTH. AFTER BACKFILLING, TREES WILL BE WATERED THOROUGHLY TO SETTLE THE SOIL AROUND THE ROOT BALL AND ELIMINATE ANY AIR POCKETS.

CMS ITEM 661.10: PLANTING

PLANT MATERIALS SHALL BE INSTALLED ACCORDING TO THE ACCOMPANYING DETAILS IN THE SET. AFTER BACKFILLING, TREES WILL BE WATERED THOROUGHLY TO SETTLE THE SOIL AROUND THE ROOT BALL AND ELIMINATE AIR POCKETS. REMOVED ALL TWINE, BAGS, AND ROPING BEFORE BACKFILLING THE PLANT HOLE. REMOVED THE TOP ONE THIRD OF THE WIRE FROM ROOT BALLS HAVING A WIRE BASKET. REMOVE ALL ROT-PROOF BURLAP.

CMS ITEM 661.10A: PLANTING HOLES

WHERE TREES AND SHRUBS AND SHOWN ON THE PLANS, THE INDIVIDUAL HOLES SHALL BE DUG ON CENTERS PER THE SPACINGS NOTED ON THE LANDSCAPE PLANS. THESE HOLES SHALL ALLOW FOR A MINIMUM OF 12" (INCHES) OF BACKFILL MATERIAL AROUND THE SIDES OF THE BALLS AS ILLUSTRATED ON THE DETAILS. THE BOTTOM OF THE HOLE SHALL BE DUG NO DEEPER THAN THE BALL TO BE PLANTED. IF AN AUGER IS USED IN DIGGING POCKET HOLES AND POLISHED (SHINY) SIDES OCCUR IN CLAY OR HEAVY SOIL, THE USED OF SUCH AUGER SHALL BE DISCONTINUED AND THE HOLES SHALL BE DUG WITH A BACKHOE OR ANOTHER APPROVED METHOD.

CMS ITEM 661.10B: PLANTING BEDS

ALL PLANT BEDS SHALL BE ACCORDANCE WITH ODOT ITEM 661 UNLESS OTHERWISE NOTED. THE MONTH PRIOR TO CULTIVATION AND PLANTING ALL SHRUB BEDS WILL BE TREATED WITH ROUNDUP BRAND HERBICIDE OR AN APPROVED EQUAL IF WEEDS ARE PRESENT. AFTER VEGETATION PLACEMENT AND FERTILIZING HAVE BEEN COMPLETED AND APPROVED, THE LANDSCAPE BEDS WILL BE TREATED WITH SURFLAN BRAND HERBICIDE OR AN APPROVED EQUAL. THE RATE AND METHOD OF APPLICATION SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURERS PRODUCT LABEL AND CONSISTENT WITH CURRENT PRACTICES FOR ROADSIDE MANAGEMENT. THIS WORK SHALL BE ACCOMPLISHED UNDER THE DIRECT SUPERVISION OF A PESTICIDE APPLICATOR LICENSED BY THE STATE OF OHIO. AFTER THE LAYOUT IS APPROVED BY THE PROJECT ENGINEER, ALL PLANTING BED AREAS SHALL BE CULTIVATED/TILLED TO A MINIMUM DEPTH OF 6" (TILLING TOPSOIL INTO EXISTING SOIL.) USING A PLOW, DISC, OR ROTOTILLER.

SPECIAL MISC.: FERTILIZER PACKETS

FOUR OUNCE (3-YEAR) COMMERCIAL FERTILIZED PACKETS USED IN PLANTING OPERATION SHALL BE DELIVERED DRY IN ORIGINAL, UNOPENED CONTAINERS. FERTILIZER ANALYSIS SHALL BE 16% NITROGEN, 8% PHOSPHORIC ACID AND 16% POTASH. FERTILIZER SHALL BE OF A SLOW RELEASE TYPE IN A POLYETHYLENE PERFORATED PACKET WITH MICROPORE HOLES.

THE PACKETS SHALL BE PLACED 6 TO 8 INCHES DEEP AND EVENLY SPACED AROUND THE PERIMETER OF THE PLANTING HOLE. ADJACENT TO THE BALL OR ROOT MASS BUT NOT IN DIRECT CONTACT WITH THE ROOTS. THE PACKETS SHALL NOT BE CUT, RIPPED OR DAMAGED. EACH SHRUB OR TREE SHALL BE FERTILIZED ACCORDING TO THE FOLLOWING SCHEDULE:

SHRUBS 2' - 3'	2 PACKETS
SHRUBS 3' - 4'	3 PACKETS
TREES 2" - 3" CAL.	3 PACKETS
EVERGREEN TREES	3 PACKETS

IF IT BECOMES NECESSARY TO REMOVED AND REPLACE MISSING, DEAD, OR UNHEALTHY PLANTS, ALL OLD PACKETS SHALL BE REPLACED WITH NEW PACKETS. AN ESTIMATED QUANTITY OF 61 EACH HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY.

CMS ITEM 661.11: MULCH

MULCH SHALL BE A FINELY SHREDDED HARDWOOD MULCH OF UNIFORM TEXTURE AND SIZE AND SHALL BE A SLOW DECOMPOSING ALL ORGANIC MATERIAL. IT SHALL NOT CONTAIN AN EXCESSIVE AMOUNT OF ACID THAT MAY ADVERSELY AFFECT PLANT GROWTH. SHREDDED MULCH SHALL BE AGED OR DYED TO BE UNIFORMLY DARK BROWN IN COLOR. MULCH APPLICATION SHALL BE RAKED SMOOTH, PRE-EMERGENT HERBICIDE APPLIED, AND THEN MULCHED TO A DEPTH OF 3", AND THEN THOROUGHLY WATERED. WOOD SHAVINGS, PEAT MOSS, OR CORN COBS SHALL NOT BE USED IN TOP MULCH. SHREDDED HARDWOOD SHALL BE AGED (STOCKPILED) AT LEAST SIX MONTHS PRIOR TO PLACEMENT AROUND PLANTS AND ARE TO BE FREE OF ALL ASH SPECIES MATERIAL. MULCH SHALL BE AS NOTED ON DETAILS. MULCH SHALL BE PLACED TO A DEPTH OF 3". MULCH BEDS SHALL HAVE A NEAT, EDGED APPEARANCE.

CMS ITEM 661.13: BRACING

BRACING SHALL BE AS PER PLANTING DETAILS ON SHEET 103.

CMS ITEM 661.14: PERIOD OF ESTABLISHMENT MAINTENANCE:

DURING PLANTING: MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE UNTIL THE PROJECT IS COMPLETE AND ACCEPTED BY MIAMI TOWNSHIP. PLANTS SHALL BE WATERED, MULCHED AND PRUNED, WEED GROWTH CONTROLLED AND OTHERWISE MAINTAINED AS NEEDED. SETTLED PLANTS SHALL BE RAISED AND REALIGNED AND GUY WIRES TIGHTENED AND REPAIRED.

AFTER PLANTING: MIAMI TOWNSHIP WILL BEGIN MAINTENANCE UPON PROJECT ACCEPTANCE. IT SHALL BE THE RESPONSIBILITY OF MIAMI TOWNSHIP TO WEED LANDSCAPE AREAS, MULCH AND PRUNE AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS.

ADDITIONALLY, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WATER AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS DURING THE WARRANTY PERIOD. THE COST OF WATERING WILL BE AT THE SOLE COST OF THE CONTRACTOR.

WARRANTY:

THE CONTRACTOR SHALL WARRANTY ALL PLANTS TO BE IN SATISFACTORY GROWING CONDITION AND TO LIVE FOR A PERIOD OF ONE YEAR FROM COMPLETION OF THE PROJECT. ALL PLANTS INSTALLED PRIOR TO DECEMBER 31ST SHALL BE GUARANTEED TO BREAK INTO GROWTH (NOT JUST BUD BREAK), THE FOLLOWING SPRING. PLANTS WILL BE REPLACED ONCE DURING THE GUARANTEE PERIOD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WATER AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS DURING THE WARRANTY PERIOD. THE COST OF WATERING WILL BE AT THE SOLE COST OF THE CONTRACTOR. REPLANT AS REQUIRED ACCORDING TO THE SPECIFICATIONS OF THE ORIGINAL MATERIAL. REPLACEMENT PLANTS ARE SUBJECT TO A NEW PERIOD OF ESTABLISHMENT.

CALCULATED JRM
CHECKED BMG

LANDSCAPE NOTES

MOT-75-0.76

ITEM 661 - DECIDOUS SHRUB, 3' HEIGHT, AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW SHRUBS SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE SHRUB PLANTING DETAIL (DETAIL 4) OF THIS SHEET.

ITEM 661 - EVERGREEN SHRUB, 18" HEIGHT, AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW SHRUBS SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE SHRUB PLANTING DETAIL (DETAIL 4) OF THIS SHEET.

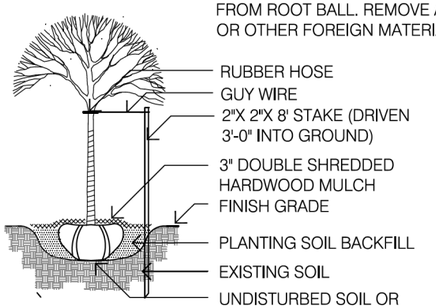
ITEM 661 - ORNAMENTAL TREE, 2" CAL., AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW TREES SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE TREE PLANTING DETAIL (DETAIL 1 OR 2) OF THIS SHEET.

ITEM 661 - DECIDUOUS TREE, 3" CAL., AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW TREES SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE TREE PLANTING DETAIL (DETAIL 1 OR 2) OF THIS SHEET.

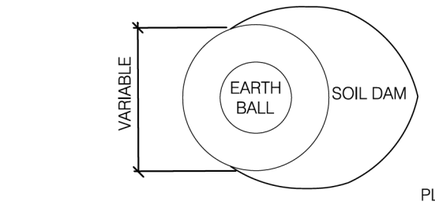
NOTES:
1. TOP OF ROOT BALL TO BE 2"-3" ABOVE ADJACENT FINISH GRADE
2. REMOVE ROPE AND BURLAP FROM TOP 1/3 OF ROOT BALL CUT TOP 1/3 OF WIRE BASKET FROM ROOT BALL. REMOVE ALL LABELS, TAGS OR OTHER FOREIGN MATERIALS FROM LIMBS.

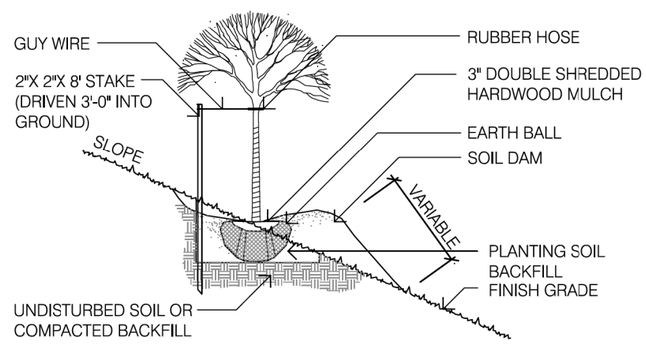


1 TREE PLANTING DETAIL

SCALE: NOT TO SCALE

NOTES:
1. TOP OF ROOT BALL TO BE 2"-3" ABOVE ADJACENT FINISH GRADE
2. REMOVE ROPE AND BURLAP FROM TOP 1/3 OF ROOT BALL CUT TOP 1/3 OF WIRE BASKET FROM ROOT BALL. REMOVE ALL LABELS, TAGS OR OTHER FOREIGN MATERIALS FROM LIMBS.

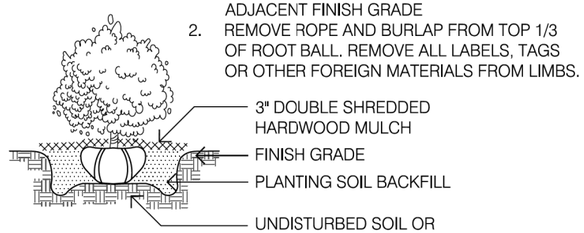




2 TREE PLANTING ON SLOPE DETAIL

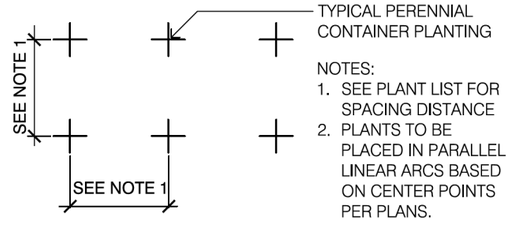
SCALE: NOT TO SCALE

NOTES:
1. TOP OF ROOT BALL TO BE 1" ABOVE ADJACENT FINISH GRADE
2. REMOVE ROPE AND BURLAP FROM TOP 1/3 OF ROOT BALL. REMOVE ALL LABELS, TAGS OR OTHER FOREIGN MATERIALS FROM LIMBS.



4 SHRUB PLANTING DETAIL

SCALE: NOT TO SCALE



NOTES:
1. SEE PLANT LIST FOR SPACING DISTANCE
2. PLANTS TO BE PLACED IN PARALLEL LINEAR ARCS BASED ON CENTER POINTS PER PLANS.

5 PERENNIAL PLANT SPACING DETAIL

SCALE: NOT TO SCALE

CALCULATED JRM
CHECKED BMG

LANDSCAPE DETAILS

MOT-75-0.76

103
106

IRRIGATION NOTES

1. REFER TO STANDARD IRRIGATION DETAILS ON THIS SHEET FOR INTENDED CONSTRUCTION METHODS

2. THIS SYSTEM IS DIAGRAMMATIC BASED UPON INFORMATION PROVIDED BY MIAMI TOWNSHIP. INSTALL A SYSTEM THAT WILL PROPERLY COVER ALL AREAS INDICATED ON THE DESIGN. ANY DISCREPANCIES OR CHANGES (I.E., POC SIZE, LAWN OR PLANT AREAS, STATIC PRESSURE, ETC.) SHOULD BE POINTED OUT TO MIAMI TOWNSHIP AND CHANGES MADE WITH APPROVAL.

3. THIS SYSTEM SHALL BE INSTALLED USING ACCEPTED AND QUALITY INSTALLATION STANDARDS AS USED IN THE INDUSTRY. ALL MANUFACTURERS SPECIFICATIONS WILL BE FOLLOWED.

4. MAINLINE PIPING SHALL BE BURIED A MINIMUM OF 12" OF COVER AND A MAXIMUM OF 18" OF COVER. LATERAL LINE PIPING A MINIMUM OF 12" OF COVER, ALL BACKFILL SURROUNDING THE PIPE SHALL BE SCREENED AND CLEARED OF MATERIAL LARGER THAN 1" IN SIZE. BACKFILLED SHALL BE ADDED IN 6" INCREMENTS AND MECHANICALLY TAMPED.

5. SYSTEM DESIGN IS BASED ON 34 GPM AT 70 PSI PROVIDED BY SEVERAL NEW 1.5" METERS AND METER PITS BY CITY. SEE PLANS FOR LOCATIONS. POWER TO THE CONTROLLER AND ALL WIRING TO THE MODEM BY CITY. IRRIGATION CONTRACTOR IS TO INSTALL AND COORDINATE ALL HARDWARE INSTALLATION FOR THE CONTROLLERS AND MODEMS. INSTALL IN STAINLESS STEEL CABINET AS SHOWN IN DETAIL.

6. UNMARKED LATERAL PIPING SHALL BE 1" CL-200 PVC PIPE UNLESS OTHERWISE NOTED.

7. PIPE SHOWN IN PAVED AREA WITHOUT SLEEVE IS DIAGRAMMATICAL AND SHALL BE LOCATED INSIDE OF PAINTED AREA APPROXIMATELY 1' FROM HARDSCAPE.

8. ALL VALVES SHALL BE AN AMETEK VALVE OR APPROVED EQUAL. ALL ELECTRICAL CONNECTIONS AND SPLICES SHALL BE SEALED WITH WATERPROOF CONNECTIONS.

9. CONTROL WIRE WILL BE SOLID COPPER WIRE U.L APPROVED FOR DIRECT BURIAL IN GROUND. MINIMUM GAUGE #14 U.F (FOR ALL HOT WIRES) AND #12 GAUGE SINGLE STRAND FOR DISTANCES OVER 1500'. COMMON WIRE SHALL BE WHITE. THE TWO-WIRE CONTROLLER SHALL USE WIRE AS SPECIFIED BY THE MANUFACTURER. INSTALL GROUNDING FOR THE TWO WIRE EVERY 500' AND AT THE CONTROLLER.

10. NOZZLE SIZES AS SHOWN IN THE LEGEND ARE TO BE FOLLOWED CLOSELY

11. USE 12" POP UPS IN ALL BED AREAS. USE BUBBLERS AT TREE LOCATIONS AS SHOWN ON PLAN.

12. COORDINATE THE FINAL LOCATION OF CONTROLLER ENCLOSURES AS DIRECTED BY MIAMI TOWNSHIP.

13. ALL PIPE SLEEVES SHALL BE 2X THE DIAMETER OF THE PIPE UNLESS OTHERWISE NOTED.

14. PIPES ARE MARKED AT TRANSITION ONLY UNLESS OTHERWISE NOTED.

15. IRRIGATION PRODUCTS (I.E SPRINKLERS, VALVES, CONTROLLERS) SHALL BE AS LISTED IN THE LEGEND BY A SINGLE MANUFACTURER AND SHALL BE SUPPLIED BY THE REGIONAL AUTHORIZED DISTRIBUTOR TO PROVIDE SINGLE SOURCE RESPONSIBILITY FOR WARRANTY SERVICE AND SUPPORT AND TO ASSURE COMPATIBILITY IN ALL RESPECTS. NO SUBSTITUTIONS ARE ALLOWED WITHOUT FIRST SUBMITTING SUBSTITUTE PRODUCT TO PROJECT ENGINEER, MIAMI TOWNSHIP, AND RECEIVING WRITTEN APPROVAL. SUBSTITUTE PRODUCTS MUST BE EQUAL IN PERFORMANCE AND CONSTRUCTION AND SHOW A COST SAVINGS TO THE OWNER. UNAPPROVED PRODUCT SHALL BE REMOVED AT NO COST TO THE OWNER.

16. CONTRACTOR TO INCLUDE IN BID THE FIRST WINTERIZATION AND THE FIRST SPRING TURN ON. WINTERIZATION INCLUDED SHUTTING DOWN ALL IRRIGATION TAPS FOR THE SEASON. INSTRUCT MIAMI TOWNSHIP ON MAINTAINING THE IRRIGATION SYSTEM AND ALL OF THE COMPONENTS THEREOF AFTER THE 1-YEAR WARRANTY PERIOD.

17. CONTRACTOR IS TO PROVIDE AS BUILT DRAWINGS PRIOR TO FINAL PAYMENT.

THE REMOVAL OF THE EXISTING IRRIGATOIN LINE WITH SPRINKLERS AS SPECIFIED ON SHEETS 105-106 IS INCLUDED WITH THE COMPLETE IRRIGATION SYSTEM BID ITEM.

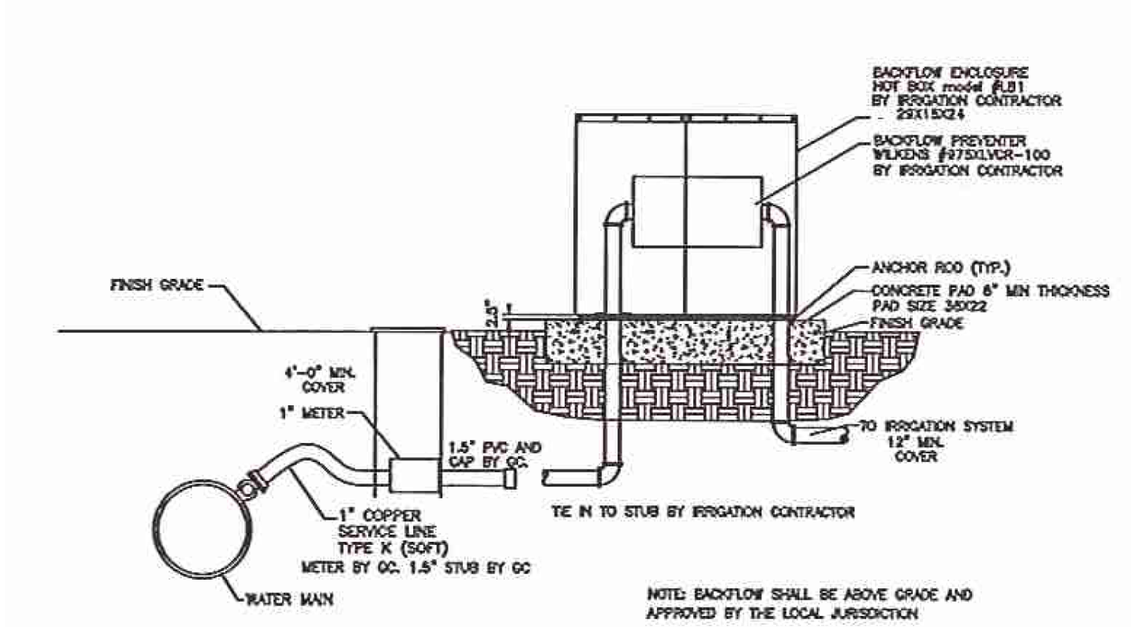
ALL MATERALS NECESSARY FOR IRRIGATION HAVE BEEN INCLUDED ON SHEET 106. IRRIGATION SYSTEM WILL BE PAID FOR UNDER THE FOLLOWING:

ITEM 680 - SPECIAL - COMPLETE IRRIGATION SYSTEM, EACH

IRRIGATION LEGEND

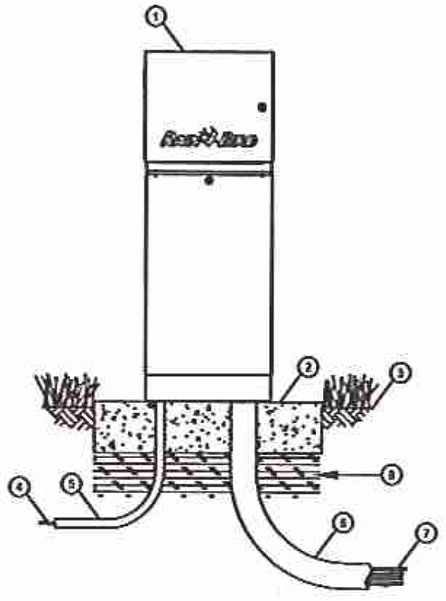
RAINBIRD 1" PGA-100 1" VALVE

RAINBIRD 1804 4" POP UP



01 IRRIGATION POINT OF CONNECTION

N.T.S. N.T.S.



1. IRRIGATION CONTROLLER: RAIN BIRD CONTROLLER WITH LXMM METAL CABINET AND LXMMPED METAL PEDESTAL. INSTALL CONTROLLER, CABINET AND PEDESTAL PER MANUFACTURER'S RECOMMENDATIONS.
2. CONCRETE PAD: 6-INCH MINIMUM THICKNESS
3. FINISH GRADE
4. POWER SUPPLY WIRE
5. 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR POWER SUPPLY
6. 3-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR STATION WIRES
7. WIRES TO REMOTE CONTROL VALVES
8. COMPACTED SUBGRADE

NOTES:
1. ESP-CONTROLLER IS AVAILABLE IN 8- OR 12-STATION BASE MODELS. ADDITIONAL MODULES IN 4-, 8- AND 12-STATION VERSIONS MAY BE ADDED TO BRING THE CONTROLLER UP TO 48 STATIONS MAXIMUM.
2. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

02 IQ-PEDP-1-T7-CM1-NA-IQ24 CONTROLLER

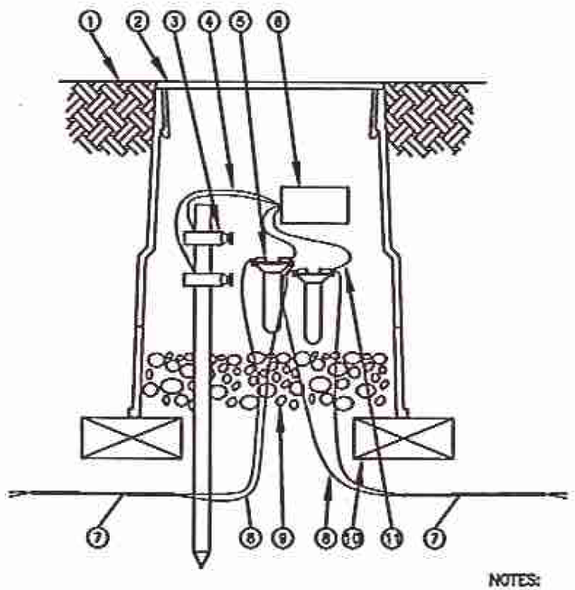
N.T.S. DETAIL-FILE

CALCULATED JRM
CHECKED BMG

IRRIGATION NOTES AND DETAILS

MOT-75-0.76

104
106



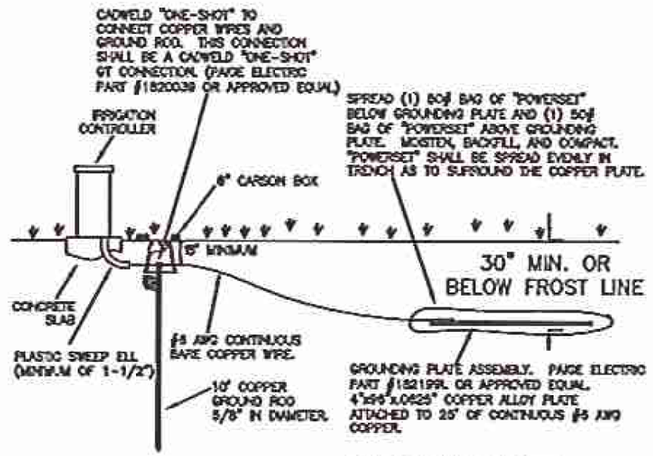
1. FINISH GRADE / TOP OF MULCH
2. VALVE BOX WITH COVER: 10-INCH ROUND SIZE
3. GROUNDING ROD: 50 OHMS OR LESS
4. WIRE TO GROUNDING ROD (1 OF 2)
5. WATER PROOF CONNECTION (1 OF 2)
6. SURGE PROTECTION
7. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER,
8. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER,
9. 3-INCH MIN. DEPTH OF 3/4-INCH WASHED GRAVEL
10. BRICK (1 OF 2)
11. WIRE

NOTES:
FOLLOW MANUFACTURERS RECOMMENDATIONS FOR DISTANCE BETWEEN SURGE PROTECTORS.

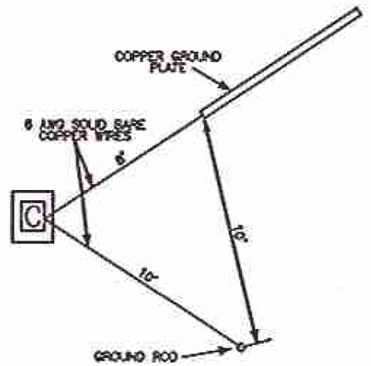
03 SURGE PROTECTION FOR TWO WIRE

N.T.S. DETAIL-FILE

Side View



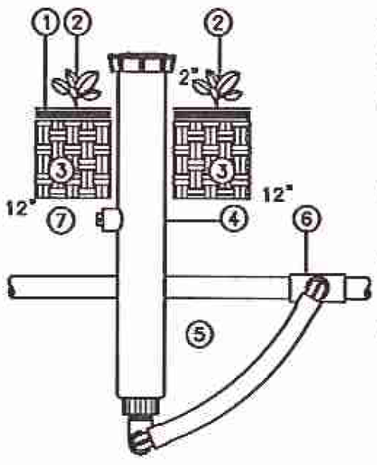
Top View



04 CONTROLLER GROUNDING ALL LOCATIONS

N.T.S. DETAIL-FILE

NOZZLE: MPR, VAN & ROTARY.



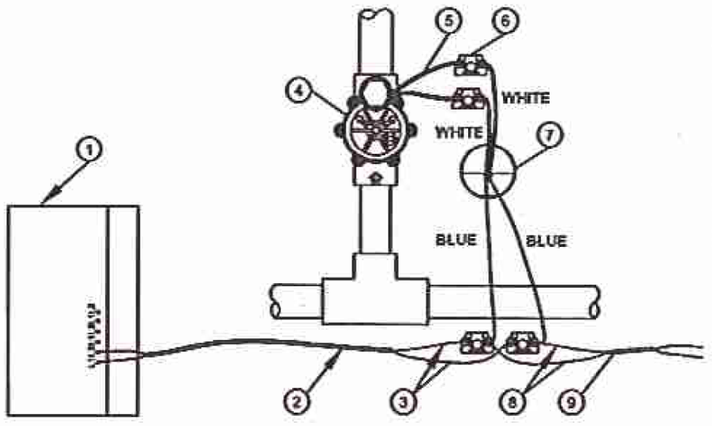
1. FINISH GRADE OR TOP OF MULCH.
2. PLANT MATERIAL (SHRUB/G.C.).
3. CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS.
4. 12" POP-UP SPRAY SPRINKLER BODY, INSTALL IN SHRUB AND GROUND COVER AREAS.
5. SWING PIPE
6. TEE/EL, PVC SCH40 LINE SIZE, (FIPT), SIZE PER SPRINKLER INLET.
7. PVC LATERAL (NON-PRESSURE PIPE). SIZE PER PLAN.

INSTALL POPUP SPRAY SPRINKLER 4" FROM PAVED EDGE, BUILDINGS AND FENCE AREAS, AND INSTALL 2" ABOVE GRADE IN PLANTER BEDS FOR SHRUBS/GROUND COVER. ADJUST COVERAGE TO AVOID OVERSPRAY.

USE ONLY TEFLON TAPE OR SEALANT ON ALL THREADED CONNECTIONS.

05 12" POP UP FOR LANDSCAPING

N.T.S. DETAIL-FILE



1. RAIN BIRD LXD CONTROLLER
2. TWO-WIRE TO LXD CONTROLLER
3. COMMUNICATION WIRE TO LXD CONTROLLER
4. SOLENOID VALVE OR MASTER VALVE
5. SOLENOID WIRE (1 OF 2)
6. DBY CONNECTORS (1 OF 2)
7. RAIN BIRD FD-101TURF M13011 DECODER
8. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR MDC)
9. TWO WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR MDC)

NOTE:
MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM FIELD DECODER TO SOLENOID IS 450-FEET.

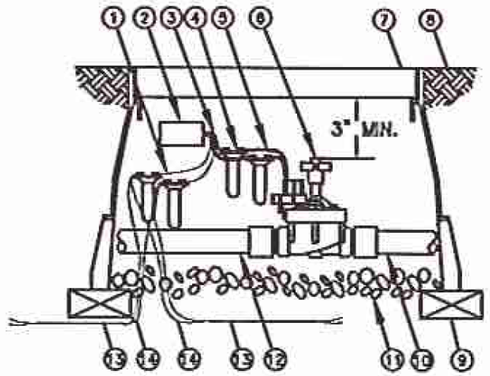
07 DECODER WIRING

N.T.S. DETAIL-FILE

CALCULATED JRM CHECKED BMG

IRRIGATION NOTES AND DETAILS

MOT-75-0.76



NOTES:

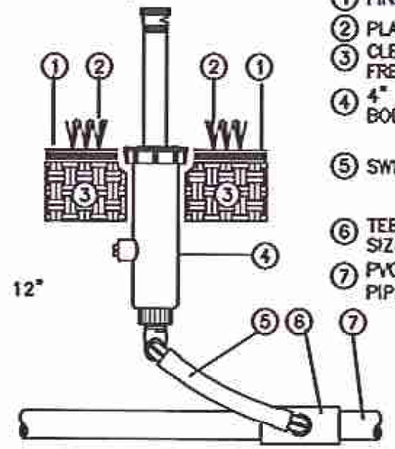
1. SECONDARY WIRE RUN – DISTANCE BETWEEN SOLENOID AND FIELD DECODER – NOT TO EXCEED 450-FEET WITH 14 GAUGE WIRE.
2. PLACE 3-FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.

1. BLUE WIRE FROM DECODER (1 OF 2)
2. DECODER
3. WHITE WIRE FROM FD-102TURF DECODER (1 OF 2)
4. DBY WATER PROOF CONNECTION (1 OF 4)
5. SOLENOID WIRE (1 OF 2)
8. REMOTE CONTROL VALVE
7. VALVE BOX WITH COVER: 12-INCH SIZE
8. FINISH GRADE / TOP OF MULCH
9. BRICK (1 OF 4)
10. PVC MAINLINE PIPE
11. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
12. PVC LATERAL PIPE
13. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR MDC)
14. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR LXD)

08 ELECTRIC VALVE AND DECODER

N.T.S. DETAIL-FILE

NOZZLE: MPR, VAN & ROTARY.



1. FINISH GRADE.
2. PLANT MATERIAL (TURF).
3. CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS
4. 4" POP-UP SPRAY SPRINKLER BODY, INSTALL IN TURF AREAS.
5. SWING PIPE
6. TEE/EL, PVC SCH40 LINE SIZE, SIZE PER SPRINKLER INLET
7. PVC LATERAL (NON-PRESSURE PIPE). SIZE PER PLAN.

INSTALL POPUP SPRAY SPRINKLER 4" FROM PAVED EDGE, BUILDINGS AND FENCE AREAS, AND INSTALL FLUSH TO GRADE, ADJUST COVERAGE TO AVOID OVERSPRAY ONTO PAVED SURFACES, FENCES, BUILDINGS AND PARKING LOTS.

USE ONLY TEFLON TAPE OR SEALANT ON ALL THREADED CONNECTIONS.

09 4" POP UP WITH MPR NOZZLE

N.T.S. DETAIL-FILE

CALCULATED JRM
CHECKED BMG

IRRIGATION NOTES AND DETAILS

MOT-75-0.76

104B
106

LEGEND

1. EXISTING IRRIGATION LINE WITH SPRINKLERS TO BE REMOVED
2. PROPOSED IRRIGATION LINE WITH RAINBIRD 1804 4" POP UP (SPRINKLER HEADS AT 12' SPACING)
3. PROPOSED 2" IRRIGATION MAINLINE
4. NOT USED
5. PROPOSED IRRIGATION VALVES
6. REMOVE & REPLACE TREES (3 SYCAMORE AND 8 WINTER KING HAWTHORN (WKH)) AT A 3.75' OFFSET FROM BACK OF BIKEWAY. SEE PLANTING DETAIL ON SHEET 103.
7. REMOVE AND REPLACE SHRUBS (4 BROADMOOR JUNIPER, 5 KNOCK OUT ROSE)

ITEM	EXT	DESCRIPTION	QTY	UNIT
661	20061	DECIDOUS SHRUB, 3' HEIGHT (KNOCK OUT ROSE), AS PER PLAN	5	EACH
661	30041	EVERGREEN SHRUB, 18" HEIGHT (BROADMOOR JUNIPER), AS PER PLAN	4	EACH
661	40081	DECIDOUS TREE, 2" CAL. (WINTER KING HAWTHORN), AS PER PLAN	8	EACH
661	40121	DECIDOUS TREE, 3" CAL. (SYCAMORE), AS PER PLAN	3	EACH

THE ABOVE QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY

NOTE: IRRIGATION PIPING THAT CROSSES UNDERNEATH PAVED AREAS IS TO BE SLEEVED WITH 4" PVC SCH 40 PLASTIC PIPE.

MATCH LINE STA. 162+50 SEE SHEET 106

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JRM CHECKED BMG

LANDSCAPE AND IRRIGATION PLAN
AUSTIN BLVD. STA. 158+00.00 TO STA. 162+50.00

MOT-75-0.76

105
106

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LEGEND

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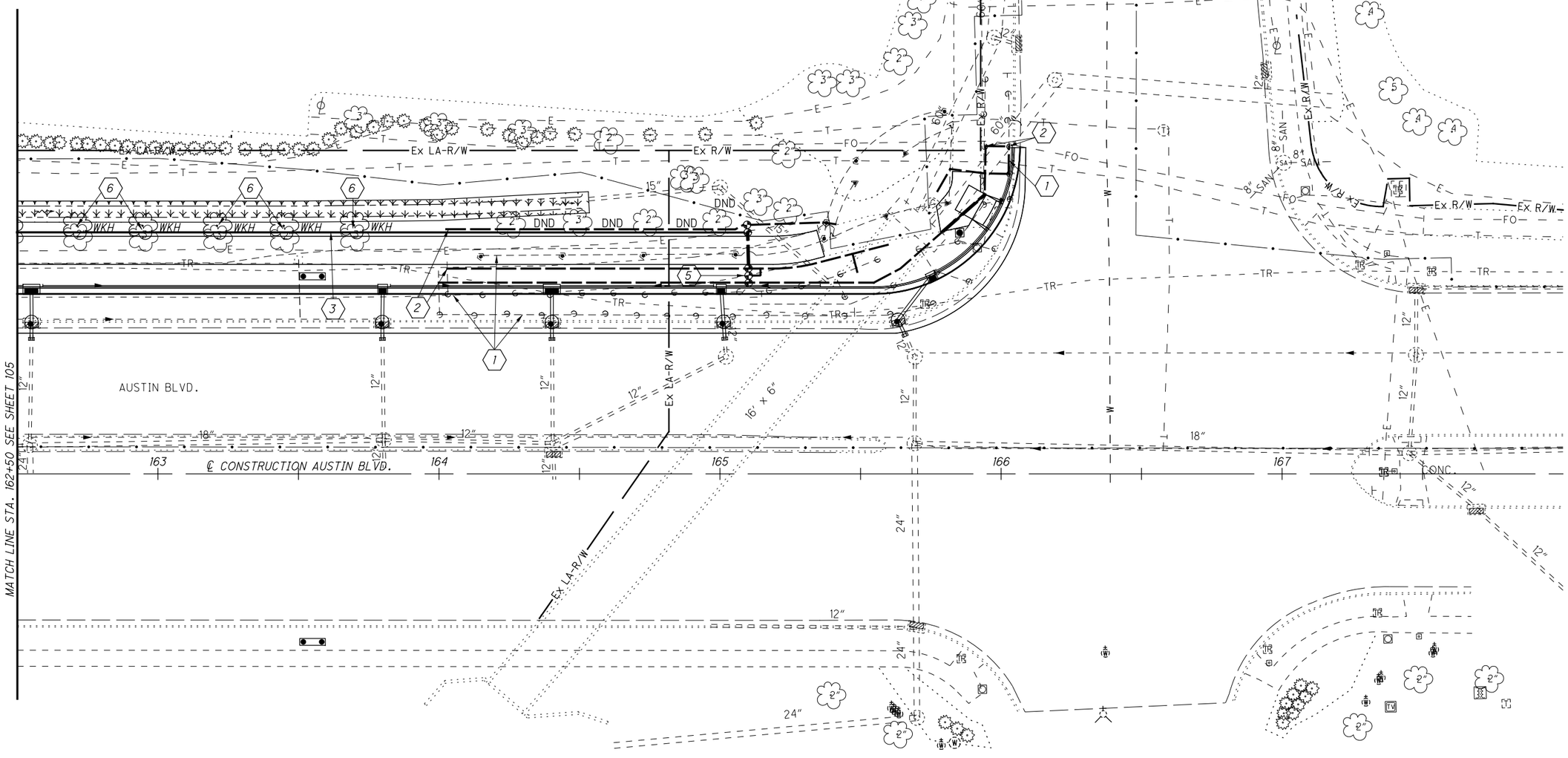
7. REMOVE AND REPLACE SHRUBS (4 BROADMOOR JUNIPER, 5 KNOCK OUT ROSE)

GRAND TOTAL	UNIT	DESCRIPTION
974	FT	200 PSI SDR 21 PVC LATERAL PIPE (SIZED PER PLAN)
629	FT	200 PSI SDR 21 PVC MAINLINE PIPE (SIZED PER PLAN)
EXISTING	FT	PVC SCH. 40 PLASTIC PIPE FOR SLEEVES
10	EACH	1" ZONE CONTROL VALVE
81	EACH	4" POP UP SPRAY WITH NOZZLE
3	EACH	12" POP UP SPRAY W/ROTATOR NOZZLE
2	EACH	BUBBLERS

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE LISTED WORK:

ITEM 680 - SPECIAL - COMPLETE IRRIGATION SYSTEM, EACH



NOTE: IRRIGATION PIPING THAT CROSSES UNDERNEATH PAVED AREAS IS TO BE SLEEVED WITH 4" PVC SCH 40 PLASTIC PIPE.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRM
CHECKED BMG

LANDSCAPE AND IRRIGATION PLAN
AUSTIN BLVD. STA. 162+50.00 TO STA. 168+00.00

MOT-75-0.76

106
106

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700' BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS AND REVISE TRAFFIC CONTROL TO ACCOMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.

HISTORIC RECORDS

CONSTRUCTION RECORDS FROM MOT-75-0.75 PID 77246 AND MOT-741-0.76 PID 92035 WERE REVIEWED INDICATING THE EXISTENCE OF BORING INFORMATION FOR THE CENTERLINE ALIGNMENT OF AUSTIN BOULEVARD AND STATE ROUTE 741. BORING LOGS FROM THE 2009 AND 2016 PLANS WERE AVAILABLE, BUT NOT PRESENTED FOR CLARITY.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE SOUTHERN OHIO LOAMY TILL PLAIN REGION WHICH IS CHARACTERIZED BY STREAM VALLEYS FILLED WITH OUTWASH THAT ALTERNATE BETWEEN BROAD FLOODPLAINS AND NARROWS. THE AREA IS CHARACTERIZED BY GLACIALLY DEPOSITED SOILS. BEDROCK IS OF ORDIVICIAN AGE AND RANGES FROM DOLOMITE AND LIMESTONE TO FOSSILIFEROUS SHALE AND LIMESTONE. BURIED VALLEYS CONTAINING VERY THICK GALCIAL OUTWASH DEPOSITS ARE COMMON WITH THE AREA.

RECONNAISSANCE

A FIELD RECONNAISANCE WAS CONDUCTED BY PAUL PAINTER FROM THE ODOT OFFICE OF GEOTEHCNICAL ENGINEERING ON NOVEMBER 23, 2017. THE CURRENT BIKE PATH PAVEMENT WAS REPORTED AS BEING IN GOOD CONDITION AND THE SURROUNDING GROUND TOPOGRAPHY WAS REPORTED TO HAVE NO SIGNS OF INSTABILITY. SURROUNDING LAND USAGE WAS NOTED AS BEING COMMERCIAL TO THE NORTH AND AN AIRPORT TO THE SOUTH.

SUBSURFACE EXPLORATION

THREE (3) BORINGS, B-001-0-17, B-002-0-17, AND B-003-0-17, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION. THE BORINGS WERE COMPLETED ON DECEMBER 27, 2017 WITH AN ATV DRILL RIG. ALL BORINGS WERE DRILLED USING A 3¾- INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS INTERVALS FOR THE FULL DEPTH OF THE BORINGS.

THE HAMMER SYSTEM USED WAS LAST CALIBRATED JUNE 1, 2017, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 81%.

EXPLORATION FINDINGS

THE BORINGS GENERALLY ENCOUNTERED COHESIVE SOILS. B-001 AND B-002 ENCOUNTERED STIFF TO VERY STIFF SILTY CLAY (A-6b) TO AN ELEVATION OF 930.5 AND 919.7 FEET RESPECTIVELY. BOTH BORINGS ENCOUNTERED VERY STIFF SILT AND CLAY (A-6a) MATERIAL, BENEATH THE SILTY CLAY LAYER, TO THE END OF THE BORINGS AT AN ELEVATION OF 927.5 FT AND 916.7 FT RESPECTIVELY. B-003 ENCOUNTERED STIFF, SILT AND CLAY (A-6a) MATERIAL TO AN ELEVATION OF 918.6 FT. BENEATH THE SILT AN CLAY LAYER, B-003 ENCOUNTERED VERY DENSE, COARSE AND FINE SAND (A-3a) MATERIAL TO AN ELEVATION OF 917.9 FT WHERE THE BORING WAS TERMINATED DUE TO CONTACT WITH AN UNKNOWN OBSTRUCTION.

ALL THREE BORINGS WERE ADVANCED THROUGH A LAYER OF TOPSOIL RANGING IN THICKNESS FROM 5 TO 6 INCHES.
WATER WAS NOT ENCOUNTERED IN ANY OF THE BORINGS.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2017.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS 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 OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND

	DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
	COARSE AND FINE SAND	*A-3a*	-	*1*
	SILT AND CLAY	*A-6a*	*4*	*3*
	SILTY CLAY	*A-6b*	*2*	*2*
		TOTAL	*6*	*6*
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	*VISUAL*		
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	*VISUAL*		

BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

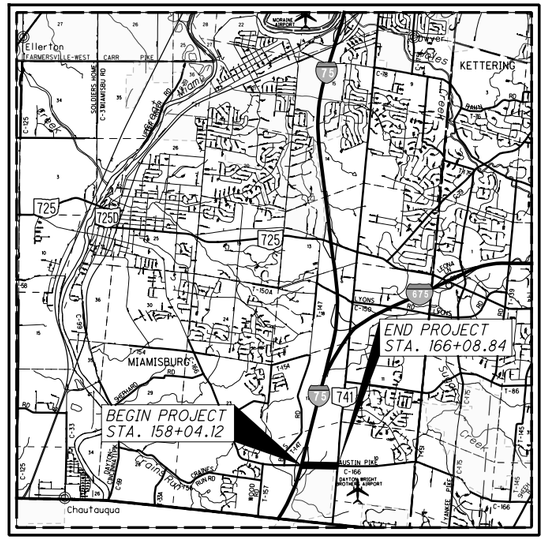
WC INDICATES WATER CONTENT IN PERCENT.

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

X/Y/D" NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT):
X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED).
Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.

* INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.

SS INDICATES A SPLIT SPOON SAMPLE.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

INDEX OF SHEETS

SUMMARY OF SOIL TEST DATA, SHEET 2

LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	
AUSTIN BLVD.						
159+00	164+50	3	3	-	-	FT
164+50	170+00	4	4	-	-	FT
159+50, 162+50 & 165+50		-	-	5	3	FT

RECON. - PPP 11/23/17
DRILLING - DML 12/27/17
DRAWN - AJC 03/23/18
REVIEWED - SAT 03/18

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL ENGINEERING
1980 W. BROAD ST. COLUMBUS, OH 43223

PID NO. 104979

SOIL PROFILE

MOT-75-0.76

SUMMARY OF SOIL TEST DATA
AUSTIN BOULEVARD

EXPLOR. ID	FROM		TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	
B-001-0-17	0.00	-	1.50	SS-1A	9	67	2.00					SAME AS SS-2A				17	A-6b (VISUAL)	*
STA. 159+38, 86' LT.	1.50	-	3.00	SS-2A	14	67	3.00	19	3	7	40	31	34	18	16	18	A-6b (10)	*
LATITUDE = 39.597139	3.00	-	4.50	SS-3A	20	78	3.50	21	2	5	40	32	33	18	15	18	A-6a (9)	
LONGITUDE = -84.235429	4.50	-	6.00	SS-4A	16	78	3.50					SAME AS SS-3A				19	A-6a (VISUAL)	
B-002-0-17	0.00	-	1.50	SS-1A	8	28	1.50					SAME AS SS-2A				21	A-6b (VISUAL)	*
STA. 162+40, 79' LT.	1.50	-	3.00	SS-2A	15	44	1.50	38	7	11	21	23	33	17	16	19	A-6b (4)	*
LATITUDE = 39.597114	3.00	-	4.50	SS-3A	18	33	2.50					SAME AS SS-4A				17	A-6a (VISUAL)	
LONGITUDE = -84.234359	4.50	-	6.00	SS-4A	12	56	1.50	38	10	11	22	19	31	16	15	19	A-6a (3)	
B-003-0-17	0.00	-	1.50	SS-1A	8	67	2.00	25	11	11	29	24	28	15	13	15	A-6a (5)	*
STA. 165+67, 82' LT.	1.50	-	3.00	SS-2A	9	33	1.50	27	9	11	28	25	30	17	13	17	A-6a (5)	*
LATITUDE = 39.597116	3.00	-	3.30	SS-3A	2/6/50/0"	42	1.00					SAME AS SS-2A				16	A-6a (VISUAL)	
LONGITUDE = -84.233198	3.30	-	4.00	SS-3B			- GRAY COARSE AND FINE SAND WITH TRACE SILT & TRACE STONE FRAG.									7	A-3a (VISUAL)	

COMMERCIAL

B-001-0-17

B-002-0-17

MATCH LINE STA. 164+50

159 160 161 162 163 164

COMMERCIAL

950 940 930 920 910 900

B-001-0-17
86' LT.
TOPSOIL (6")
14 9 17 18
16 20 18 19
N_{60} WC

B-002-0-17
79' LT.
TOPSOIL (5")
15 8 21 19
12 18 17 19
N_{60} WC

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN AJC
CHECKED SAT

SOIL PROFILE
STA. 159+00 TO STA. 164+50

MOT-75-0.76

3 / 5

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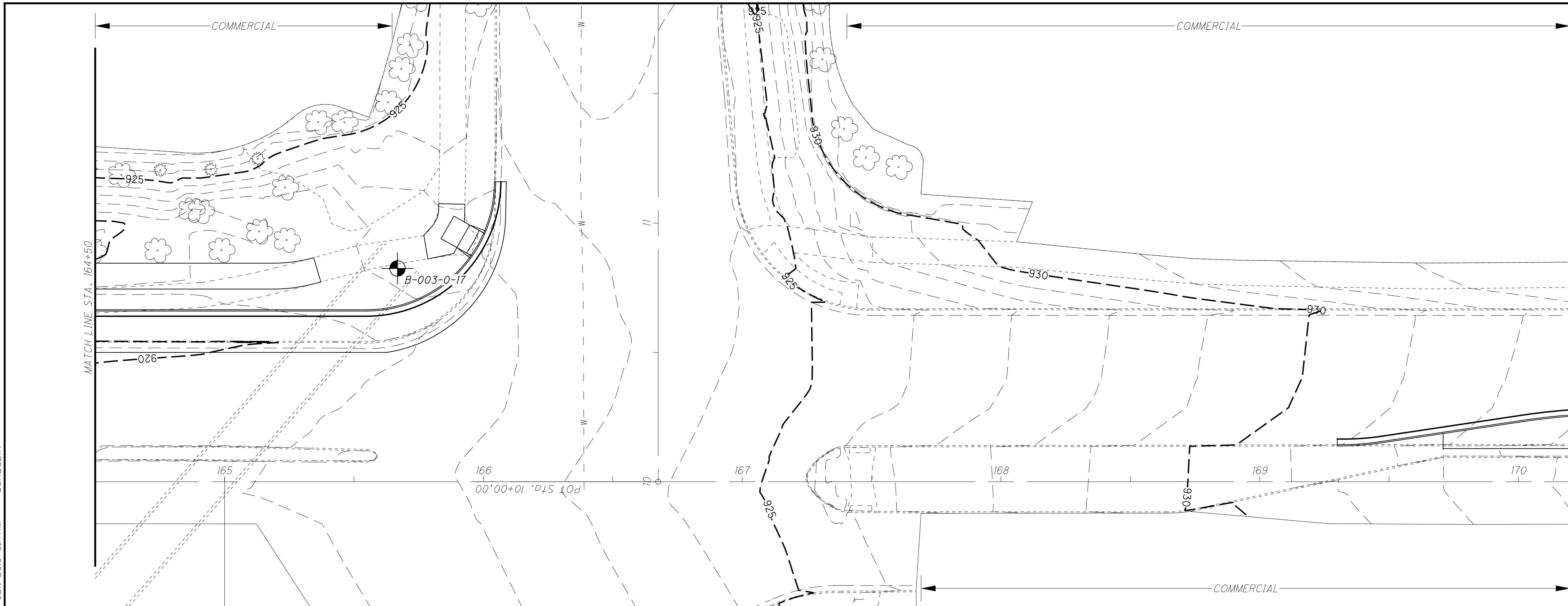
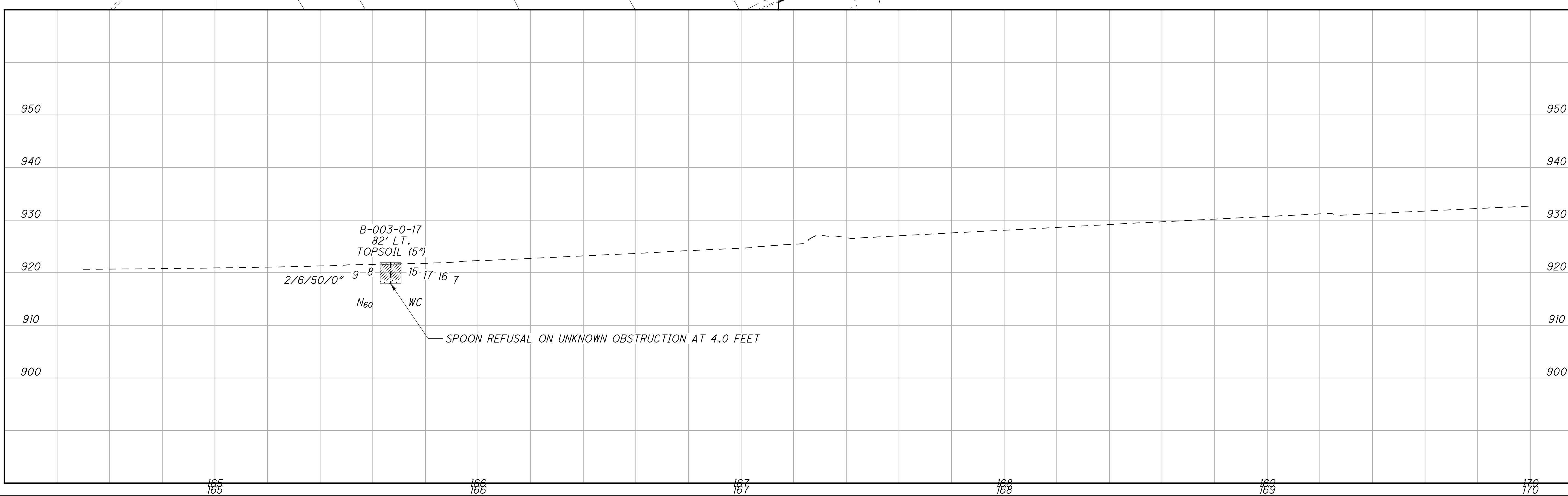




HORIZONTAL SCALE IN FEET 0 10 20 40

DRAWN AJC
CHECKED SAT

SOIL PROFILE
STA. 164+50 TO STA. 170+00

MOT-75-0.76

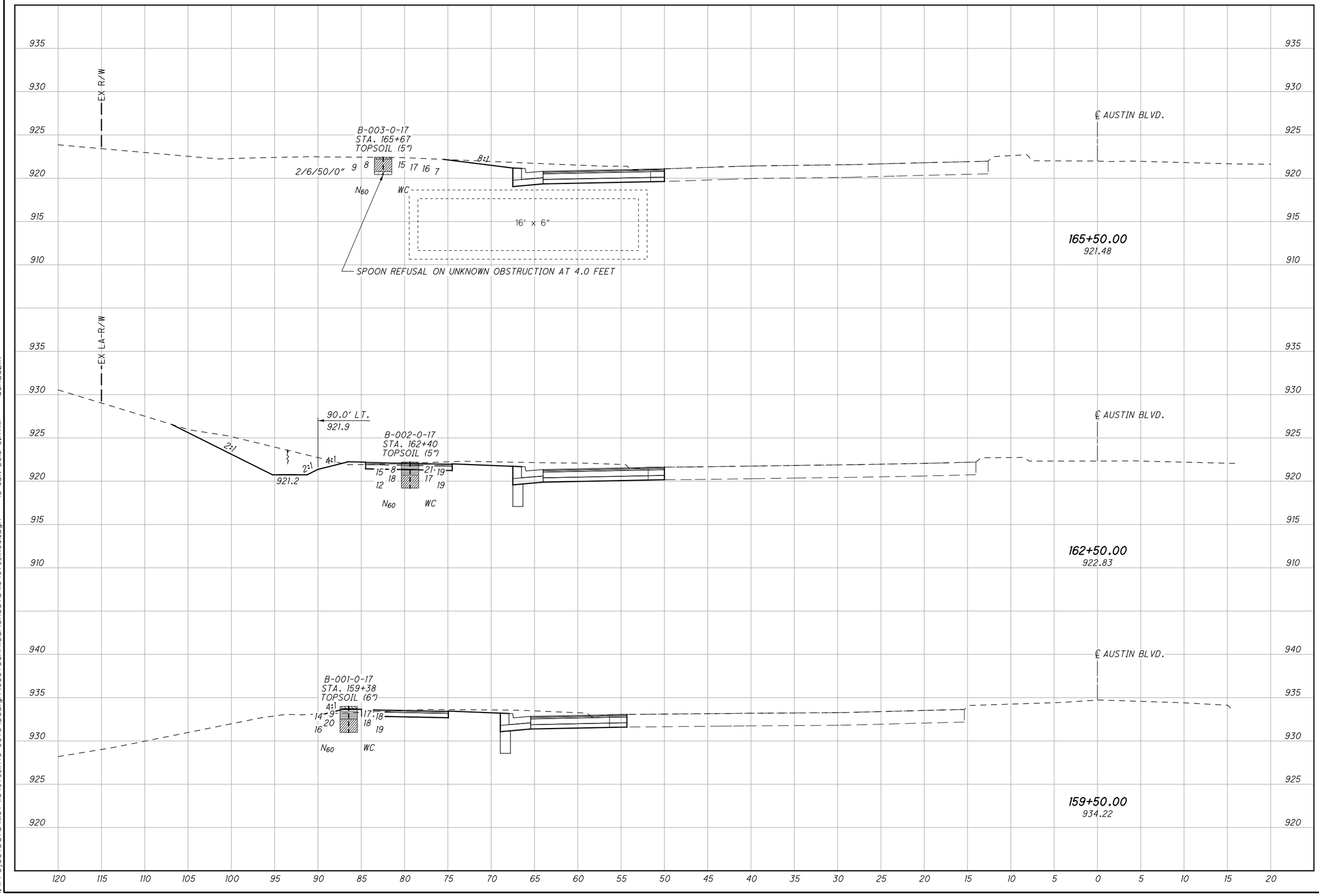
SOIL PROFILE
AUSTIN BOULEVARD CROSS SECTIONS

HORIZONTAL SCALE IN FEET
0 2.5 5 10

DRAWN AJC
CHECKED SAT

MOT-75-0.76

5 / 5



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