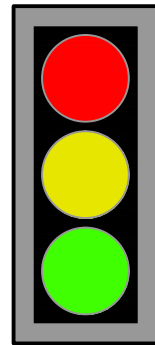


Denver International Airport

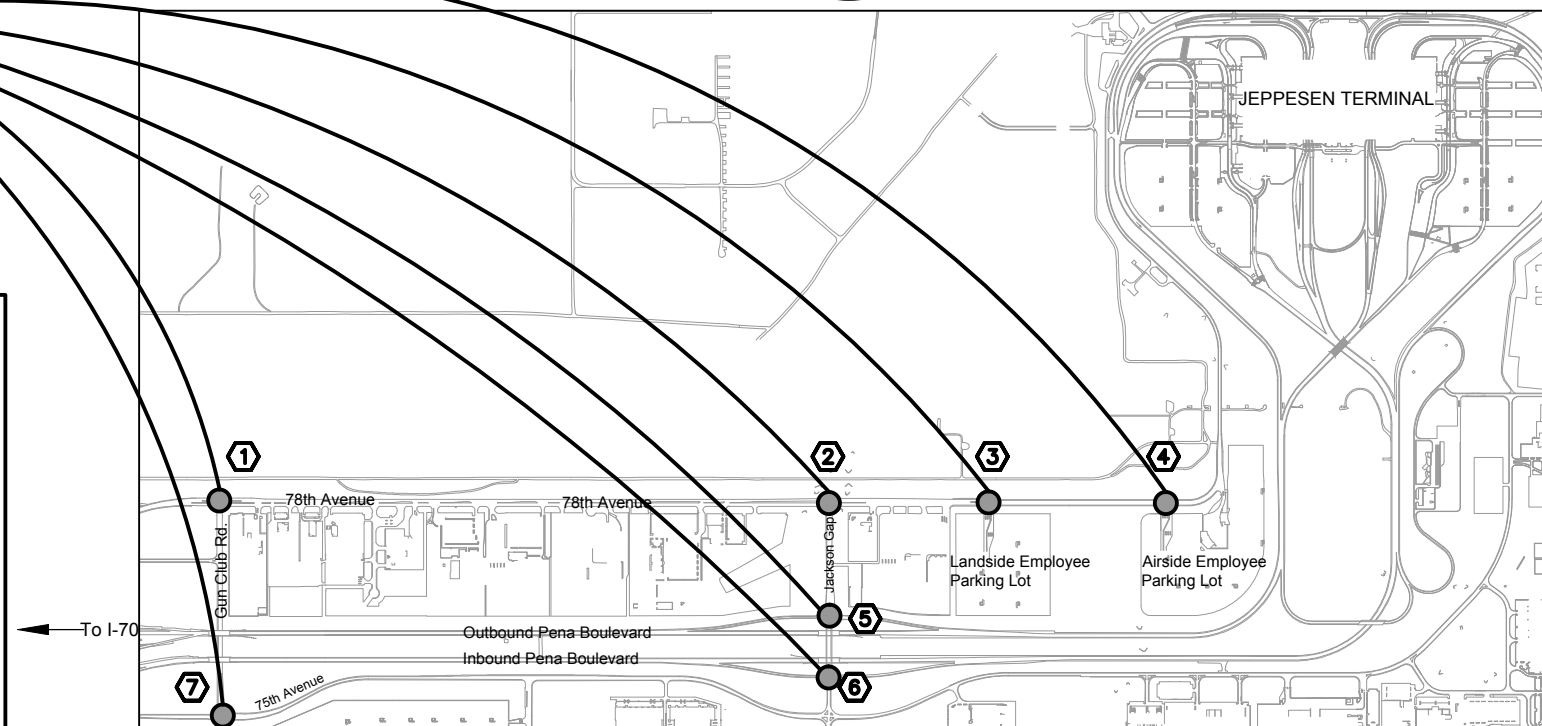
78TH AVENUE TRAFFIC SIGNAL REPLACEMENTS

DIA Construction Contract No. 201309304

ISSUED FOR BID



- ① INTERSECTION OF 78TH AVE. AND GUN CLUB RD.
- ② INTERSECTION OF 78TH AVE. & JACKSON GAP.
- ③ INTERSECTION OF 78TH AVE. & EAST EMPLOYEE PARKING LOT
- ④ INTERSECTION OF 78TH AVE. & AIRSIDE EMPLOYEE PARKING LOT
- ⑤ INTERSECTION OF JACKSON GAP & OUTBOUND PENA ON/OFF RAMP
- ⑥ INTERSECTION OF JACKSON GAP & INBOUND PENA ON/OFF RAMP
- ⑦ INTERSECTION OF 75TH AVE. & GUN CLUB RD.



PROJECT LOCATION MAP

0 1000 2000 3000 4000
1"=2000'



INDEX OF SHEETS

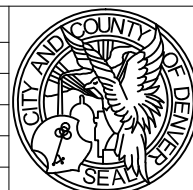
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DENVER INTERNATIONAL AIRPORT
PLANNING & DEVELOPMENT
AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed

No Revisions:

Revised:

Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT

TITLESHEET

Designer: GMF
Detailer: MWC
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Const. Contract No.

Sheet Number 1

THE PURPOSE OF THE 78TH AVENUE TRAFFIC SIGNAL REPLACEMENTS PROJECT IS TO REMOVE, REPLACE AND UPDATE EXISTING SIGNAL POLES AND SYSTEMS THAT HAVE DETERIORATED OVER TIME. THERE ARE A TOTAL OF FOUR INTERSECTIONS THAT WILL RECEIVE NEW SIGNAL POLES AND SIGNAL EQUIPMENT, WHICH INCLUDES GUN CLUB AND 78TH AVENUE, JACKSON GAP AND 78TH AVENUE, LANDSIDE EMPLOYEE PARKING LOT AND 78TH AVENUE, AIRSIDE EMPLOYEE PARKING LOT AND 78TH AVENUE. IN ADDITION TO THESE INTERSECTION, NEW CONTROLLERS AND CABINETS ARE TO BE INSTALLED ON JACKSON GAP AT THE ON/OFF RAMPS OF IB/OB PENA BOULEVARD, AND AT THE INTERSECTION OF 75TH AVENUE AND GUN CLUB ROAD. THESE THREE INTERSECTIONS WILL ALSO BE UPDATED WITH NEW 12" LED OPTICAL UNITS AND TELEMETRY (FIELD). CONTRACTOR WILL BE REQUIRED TO PICK UP TRAFFIC CONTROL DEVICES DAILY AND WILL ONLY BE ALLOWED TO WORK MONDAY-FRIDAY BETWEEN THE HOURS OF 6:00 A.M. AND 6:00 P.M. UNLESS APPROVED BY THE DIA PROJECT MANAGER.

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COLORADO
DEPARTMENT OF TRANSPORTATION

STANDARD PLANS LIST
M&S STANDARDS
July 04, 2006
Revised on July 29, 2011

THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

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Horiz. Scale: N/A Vert. Scale: N/A						Revised:	Designer: GMF	Structure Numbers		
Unit Leader: MHS						Void:	Detailer: MWC			
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1. IT IS ESTIMATED THAT 90 HOURS OF POTHOLING WILL BE REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH THE APPROPRIATE UTILITY REPRESENTATIVES TO BE ONSITE DURING POTHOLING AND SHALL LIKEWISE BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL REFER TO THE UTILITY SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. WHERE IT IS REQUIRED TO SAWCUT EXISTING PAVEMENT OR CONCRETE, THE CUTTING SHALL BE DONE TO A NEAT LINE WITH A CUTTING SAW OR OTHER METHOD APPROVED BY THE DIA ENGINEER. THIS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
3. ITEM 626-00000 MOBILIZATION SHALL BE PAID FOR AS LUMP SUM. FOR BIDDING PURPOSES, THE TOTAL AMOUNT OF MOBILIZATION SHALL NOT EXCEED 5% OF THE TOTAL CONTRACT AMOUNT. REFER TO DIA TECHNICAL SPECIFICATIONS DIVISION 1, SECTION 1505 FOR FURTHER REFERENCE.
4. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT HIS EXPENSE, ANY EXISTING SIGNS DAMAGED BY THE CONTRACTOR.
5. UTILITY LINES AS SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. PLEASE CALL 811 FOR LOCATES PRIOR TO EXCAVATION.
6. THE CONTRACTOR SHALL FIELD LOCATE AND POTHOLE ALL POTENTIAL CONFLICTS WITH EXISTING BURIED UTILITIES WITHIN THE PROPOSED CONSTRUCTION LIMITS AS SHOWN ON THE PLANS OR BY FIELD LOCATION MARKINGS. IF CONFLICTS EXIST, MODIFY PROPOSED CONSTRUCTION PLANS TO AVOID ALL EXISTING BURIED UTILITY FACILITIES. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SUBSECTION 105.10 OF THE CDOT STANDARD SPECIFICATIONS CONCERNING UTILITIES.
7. THE CONTRACTOR SHALL COMPLY WITH ARTICLE 1.5 OF TITLE 9, CRS ("EXCAVATION REQUIREMENTS") WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 1-800-922-1987 OR 811, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER. UTILITY SERVICE LATERALS SHALL ALSO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING. THE CONTRACTOR IS RESPONSIBLE FOR LOCATION AND NOTIFICATION OF NON-MEMBER UTILITIES.
8. UTILITY FEATURES, SUCH AS PULL BOXES SHALL BE PROTECTED WITH PLASTIC ORANGE FENCING DURING CONSTRUCTION OR AS APPROVED BY THE DIA ENGINEER. IF ANY UNDERGROUND UTILITIES ARE EXPOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER OF THE UTILITY TO ALLOW INSPECTION OF THE UTILITY FOR DAMAGE. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGED UTILITIES. THE COST OF SUCH FENCING AND PROTECTION SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
9. THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL, EQUIPMENT OR VEHICLES WITHIN 15 FEET OF THE ROAD EDGE WITHOUT PERMISSION OF THE DIA ENGINEER.
10. ALL CONCRETE SHALL MEET REQUIREMENTS FOR CLASS 2 SULFATE RESISTANCE PER SECTION 601 OF THE CDOT STANDARD SPECIFICATIONS
11. EROSION CONTROL MEASURES MUST BE IMPLEMENTED BEFORE CONSTRUCTION BEGINS.
12. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
13. DISPOSAL OF EXCESS MATERIAL OFF-SITE OR IMPORTING OF MATERIALS ON-SITE, REGARDLESS OF PROPERTY OWNERSHIP, MUST BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.
14. THE CONTRACTOR SHALL KEEP THE WORK AREA FREE FROM STANDING WATER AND SHALL KEEP EXCAVATION AND TRENCH AREAS FREE FROM STORMWATER RUN OFF. THE COST OF THIS PROTECTION SHALL BE INCLUDED IN THE COST OF THE WORK.
15. MATERIAL THAT IS LOOSENEED FROM THE ROADWAY, TRENCH OR OTHER AREAS SHALL BE REMOVED OFF THE ROADWAY (PICKUP BROOM, SWEPT) IMMEDIATELY. NONE OF THE MATERIAL SHALL BE ALLOWED TO RUN OFF INTO WATERS OF THE STATE BY ANY MEANS.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL APPLICABLE PERMITS AND COORDINATING WITH LOCAL UTILITY COMPANIES TO PROVIDE POWER (ELECTRICAL SERVICE) TO THE SIGNAL SYSTEM. ALL WORK RELATED TO UPGRADING THE EXISTING SERVICE SHALL BE PAID FOR AS ITEM 700-70034. CONTRACTOR SHALL CONTACT JOANNA GOMEZ AT XCEL ENERGY. CONTACT INFORMATION IS AS FOLLOWS:

JOANNA GOMEZ
DESIGNER, GATEWAY SERVICE CENTER
3751 FRASER STREET
AURORA, COLORADO 80011
PHONE: 303-375-3516
FAX: 303-375-3555 JOANNA.GOMEZ@XCELENERGY.COM

17. ANY REMAINING SOIL LEFT FROM DRILLING AND ALL REMOVAL ITEMS, EXCEPT AS NOTED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY OFF DIA PROPERTY AND AT THE EXPENSE OF THE CONTRACTOR.
18. CONCRETE USED FOR THE CAISSONS SHALL BE CLASS BZ. AS PER SECTION 601.02 OF REVISION OF SECTION 601 AND 701, STRUCTURAL CONCRETE.
19. THE EXISTING TRAFFIC LIGHT POLES ARE COATED WITH PAINT, WHICH MAY CONTAIN LEAD. THE POLES SHALL BECOME THE CONTRACTOR'S PROPERTY. THE CONTRACTOR SHALL ASSUME THAT THE PAINT IS LEAD-BASED AND RECYCLE THE POLES IN ACCORDANCE WITH SPECIFICATION 250.04 OF THE 2011 CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE HEALTH AND SAFETY OF WORKERS, AND THE PROPER MANAGEMENT OF PAINTED MATERIALS IN ACCORDANCE WITH OSHA AND STATE AND FEDERAL REGULATIONS. CUTTING OR BURNING OF PAINTED SURFACES SHALL BE PROHIBITED TO MINIMIZE GENERATION OF LEAD FUMES.
20. TRAFFIC SIGNAL LIGHT POLES, MAST ARMS, AND PEDESTAL POLES SPECIFIED IN THESE PLANS SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM STANDARDS.
21. CONTRACTOR WILL BE PAID FORCE ACCOUNT TO FURNISH AND INSTALL ELECTRICAL SERVICE, TELEMETRY FIELD AT THE DIA ELECTRICAL SHOP, AND ELECTRONICS PER SPECIAL PROVISION. ALL ITEMS ARE INCLUDED UNDER PAY ITEM 700-70034 FORCE ACCOUNT MISCELLANEOUS.
22. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE USE OF TEMPORARY CONSTRUCTION EQUIPMENT, E.G. BOOM TRUCKS, CRANES, ETC., WITH THE DIA OPS 6 DUTY MANAGER (303.342.4200) TO NOTIFY THE FAA AIR TRAFFIC CONTROL TOWER (ATCT) PRIOR TO RAISING ANY EQUIPMENT ABOVE THE HEIGHTS OF EXISTING STREET LIGHT POLES AND/OR TRAFFIC SIGNAL POLES. THE REQUIRED NOTIFICATION PROCEDURES WILL BE ISSUED IN THE FAA AIRSPACE DETERMINATION LETTER FOLLOWING THE FILING OF FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION, THROUGH THE DIA PLANNING OFFICE AT LEAST 45 DAYS PRIOR TO START OF CONSTRUCTION.
23. FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION, HAS BEEN SUBMITTED FOR THE PURPOSE OF THIS PROJECT. UNDER THESE PROVISIONS, NO TEMPORARY CONSTRUCTION SHALL EXCEED 100 FT IN HEIGHT.
24. PROJECT CONTRACT TIME WILL BE SUSPENDED FOR DOCUMENTED DELAYS DUE TO MATERIAL DELIVER, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL FORMALLY REQUEST A SUSPENSION OF TIME AND PROVIDE ALL DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, INVOICES, WORK ORDERS, OR ANY OTHER DOCUMENTS REQUESTED BY THE ENGINEER.

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			208-00002	Erosion Log (12 Inch)	LF												800			800	
			208-00034	Gravel Bag	LF												100			100	
			208-00045	Concrete Washout Structure	EA												2			2	
			208-00103	Removal and Disposal of Sediment (Labor)	HR												16			16	
			210-00815	Reset Sign Panel	EA	1		2												3	
			212-00006	Seeding (Native)	ACRE												0.25			0.25	
			216-00041	Soil Retention Blanket (Straw/Coconut)	SY												1210			1210	
			503-00018	Drilled Caisson (18 Inch)	LF	4		4		4										12	
			503-00036	Drilled Caisson (36 Inch)	LF	13		13				15								41	
			503-00042	Drilled Caisson (42 Inch)	LF					52		17								69	
			503-00048	Drilled Caisson (48 Inch)	LF	21		43				21								85	
			609-21020	Curb and Gutter Type 2 (Section II-B)	LF			85												85	
			610-00030	Median Cover Material (Concrete)	SF	540		378								45				963	
			613-00201	2 Inch Electrical Conduit (Jacked)	LF	156		221		243		110								730	
			613-00301	3 Inch Electrical Conduit (Jacked)	LF	312		442		486		220								1460	
			613-01200	2 Inch Electrical Conduit (Plastic)	LF	120		163		167		171								621	
			613-01300	3 Inch Electrical Conduit (Plastic)	LF	50		248		296		272								866	
			613-10000	Wiring	LS	0.25		0.25		0.25		0.25								1	
			613-13000	Luminaire (LED) (120 watt)	EA	2		3		3		3								11	
			614-00011	Sign Panel (Class I)	SF	71		102		40		47.5								260.5	
			614-10151	12 Inch LED (Ball) (Green)	EA									17		10				27	
			614-10152	12 Inch LED (Ball) (Red)	EA									17		13				30	
			614-10153	12 Inch LED (Ball) (Yellow)	EA									17		13				30	
			614-10156	12 Inch LED (Arrow) (Green)	EA									5		5				10	
			614-10157	12 Inch LED (Arrow) (Red)	EA									1		2				3	

Print Date: 2/1/2013

File Name: 05 - 2013XXXXXSQ01.dwg

Horiz. Scale: N/A Vert. Scale: N/A

Unit Leader: MHS

\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory

Sheet Revisions

Date:

Comments

Init.



DENVER INTERNATIONAL AIRPORT
PLANNING & DEVELOPMENT
AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed

No Revisions:

Revised:

Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT
SUMMARY OF APPROXIMATE QUANTITIES

Designer: GMF

Detailer: MWC

Sheet Subset: ROADWAY

Structure Numbers

Subset Sheets: 1 of 2

Const. Contract No.

Sheet Number 5

INDEX			CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	78th/Gun Club		78th/Jackson Gap		78th/Landside Lot		78th/Airside Lot		Jackson Gap		75th/Gun Club		Roadway		Project Totals	
BOOK	PAGE	SHEET				PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.	PLAN	AS-CONST.
			614-10158	12 Inch LED (Arrow) (Yellow)	EA									4		2				6	
			614-70112	Traffic Signal Face (12)	EA	2														2	
			614-70336	Traffic Signal Face (12-12-12)	EA	4		13		10		6								33	
			614-70448	Traffic Signal Face (12-12-12-12)	EA	2														2	
			614-70560	Traffic Signal Face (12-12-12-12-12)	EA					1		1								2	
			614-72866	Fire Preemption Unit and Timer	EA	2		2		1		1								6	
			614-72887	Microwave Vehicle Radar Detector	EA	3		3		3		3								12	
			614-75869	Fire Preemption Unit Emitter (Furnish Only)	EA													9		9	
			614-81000	Traffic Signal-Light Pole Steel	EA	1														1	
			614-81125	Traffic Signal-Light Pole Steel (1-25 Foot Mast Arm)	EA	1														1	
			614-81130	Traffic Signal-Light Pole Steel (1-30 Foot Mast Arm)	EA			1												1	
			614-81135	Traffic Signal-Light Pole Steel (1-35 Foot Mast Arm)	EA							1								1	
			614-81145	Traffic Signal-Light Pole Steel (1-45 Foot Mast Arm)	EA					2										2	
			614-81150	Traffic Signal-Light Pole Steel (1-50 Foot Mast Arm)	EA					1		1								2	
			614-81155	Traffic Signal-Light Pole Steel (1-55 Foot Mast Arm)	EA			1				1								2	
			614-81165	Traffic Signal-Light Pole Steel (1-65 Foot Mast Arm)	EA			1												1	
			614-83000	Traffic Signal Mast Arm Steel (1-50 Foot)	EA	1														1	
			614-83000	Traffic Signal Mast Arm Steel (1-60 Foot)	EA	1														1	
			614-84000	Traffic Signal Pedestal Pole Steel	EA	1		1		1										3	
			614-86105	Telemetry (Field)	EA	2		2		1		2		2		1		2		12	
			614-86246	Controller (Type 170E-HC11)	EA	1		1		1		1		2		1				7	
			614-86800	Uninterrupted Power Supply	EA	1		1		1		1		1		1				6	
			625-00000	Construction Surveying	LS													1		1	
			626-00000	Mobilization	LS													1		1	
			630-00000	Flagging	HR													300		300	
			630-00012	Traffic Control Management	DAY													40		40	
			630-80341	Construction Traffic Sign (Panel Size A)	EA													4		4	
			630-80342	Construction Traffic Sign (Panel Size B)	EA													32		32	
			630-80358	Advance Warning Flashing or Sequencing Arrow Panel (C Type)	EA													2		2	
			630-80380	Traffic Cone	EA													100		100	
			700-70034	F/A Miscellaneous	F/A													1		1	

Print Date: 2/1/2013

File Name: 06 - 2013XXXXXSQ02.dwg

Horiz. Scale: N/A Vert. Scale: N/A

Unit Leader: MHS

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Date:

Comments

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PLANNING & DEVELOPMENT
AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed

No Revisions:

Revised:

Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT
SUMMARY OF APPROXIMATE QUANTITIES

Designer: GMF

Detailer: MWC

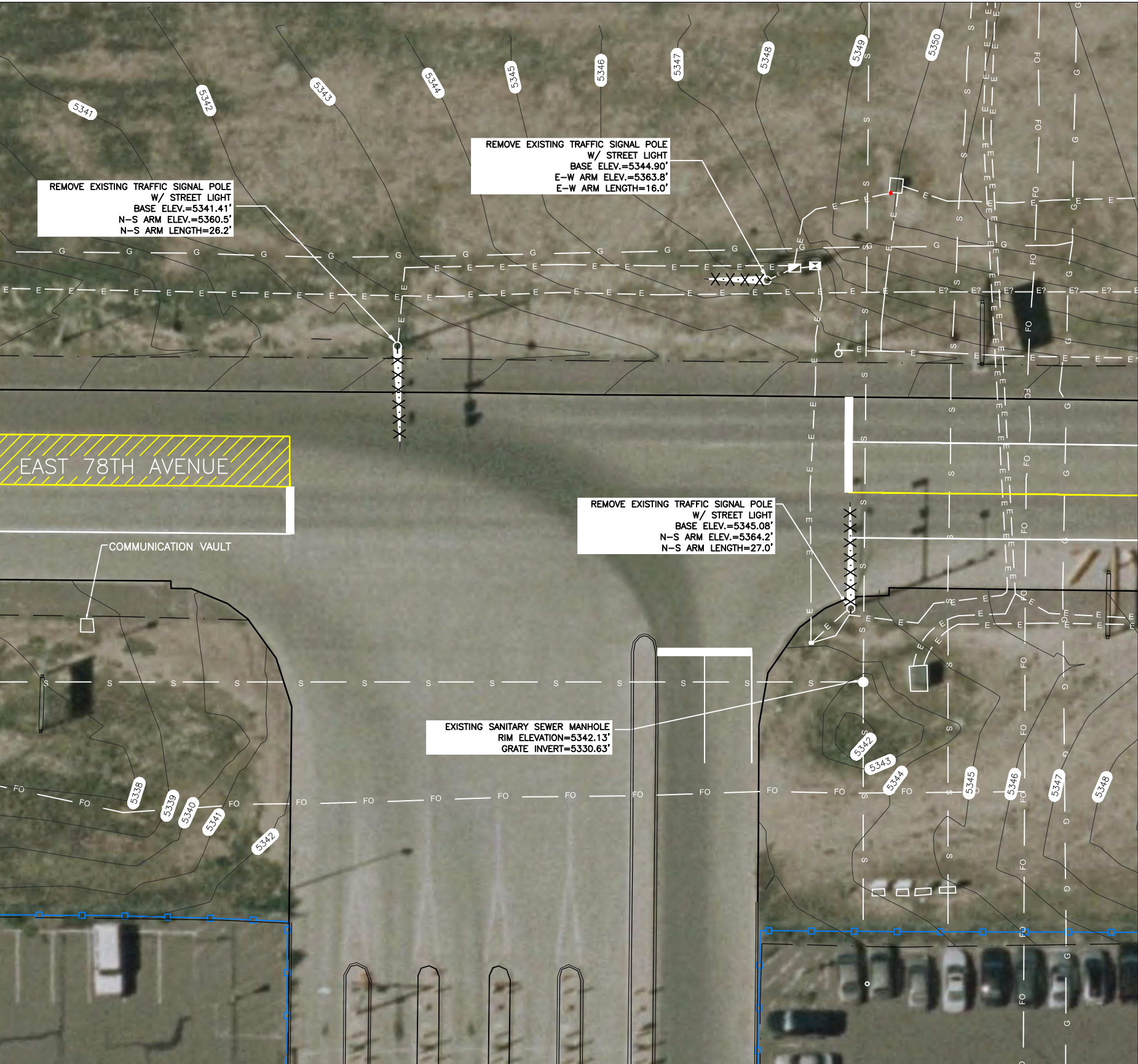
Sheet Subset: ROADWAY

Structure Numbers

Subset Sheets: 2 of 2

Const. Contract No.

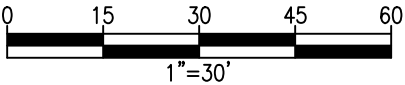
Sheet Number 6




TABULATION OF REMOVALS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	1	
	FOR INFORMATION ONLY			
	INCLUDES THE FOLLOWING:			
	SIGNAL HEADS	EA	7	
	LUMINAIRES	EA	3	
	FIRE PREEMPTION UNIT	EA	1	
	SIGNAL CONTROLLER CABINET	EA	1	
	CONDUIT AND PULL BOXES	LS	1	
	STREET SIGNS	EA	4	
202-00840	REMOVAL OF TRAFFIC SIGNAL POLE	EA	3	

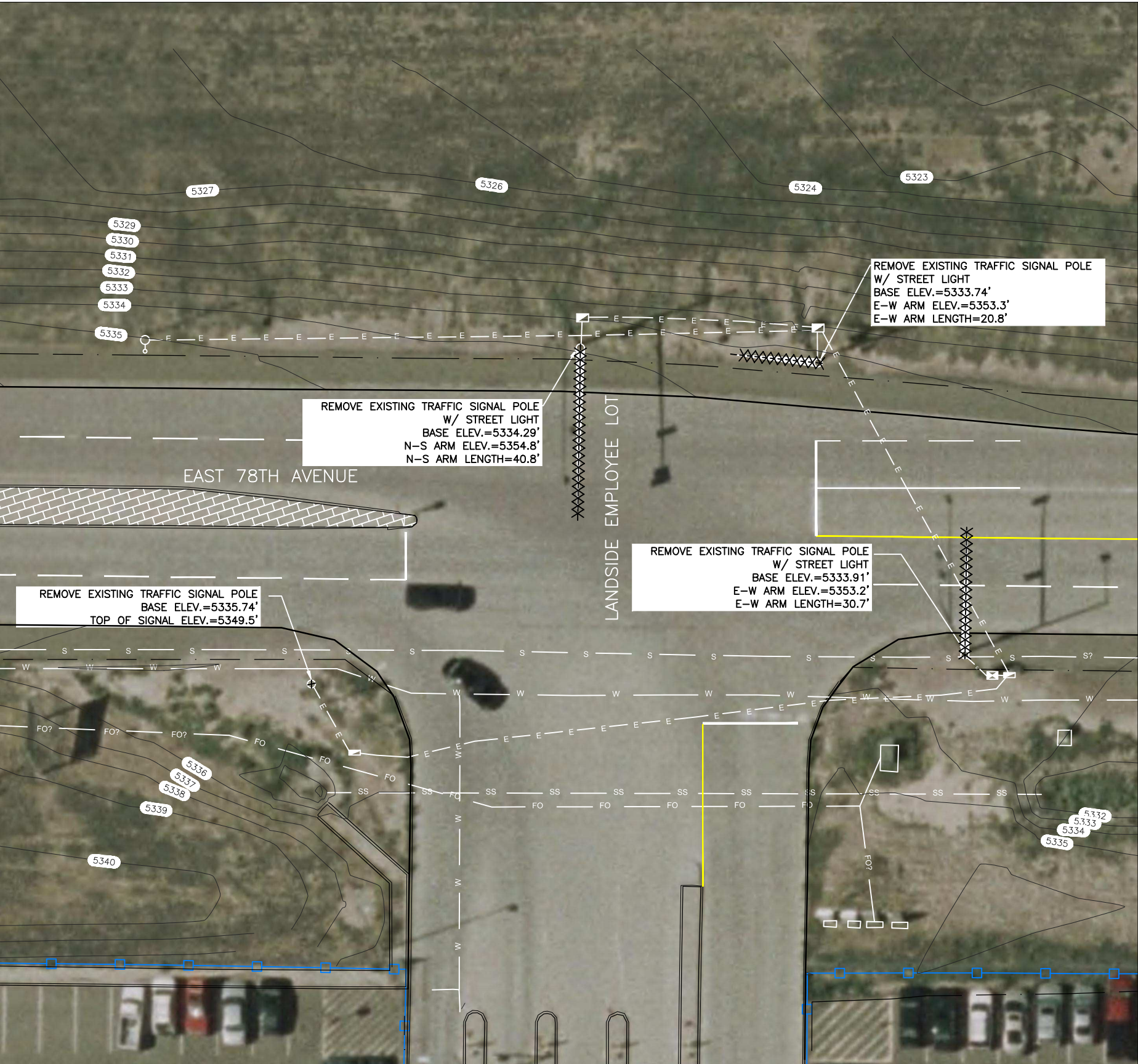
NOTES

1. CONTRACTOR'S OPERATIONS SHALL PROTECT EXISTING BOLLARDS, UTILITY LIDS, ELECTRICAL PULL BOX LIDS, LIGHT POLE BASES, CONCRETE PAVEMENT, GUARDRAIL, CURB AND GUTTER, FENCE, AND PARKING CONTROL EQUIPMENT FROM DAMAGE.
2. ALL EXISTING SIGNAL POLE CAISSONS SHALL BE REMOVED 2- FEET BELOW EXISTING GRADE. ALL WORK NECESSARY TO REMOVE AND DISPOSE OF MATERIAL SHALL BE INCLUDED IN THE WORK.
3. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND DIA DOES NOT GUARANTEE THEIR ACCURACY. CONTRACTOR IS RESPONSIBLE TO DETERMINE DEPTH AND LOCATIONS OF ALL UTILITIES PRIOR TO DISTURBANCE.



Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions				As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 07 - 2013XXXXXINTRM01.dwg		Date:	Comments	Init.		No Revisions:		78TH / AIRSIDE LOT REMOVALS				
Horiz. Scale: N/A Vert. Scale: N/A						Revised:		Designer: GMF	Structure Numbers			
Unit Leader: MHS						Void:		Detailer: MWC				
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory								Sheet Subset: ROADWAY	Subset Sheets: 1 of 4	Sheet Number 7		

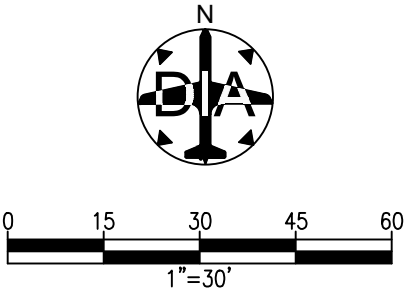
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AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

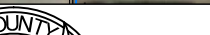


TABULATION OF REMOVALS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	1	
	FOR INFORMATION ONLY			
	<u>INCLUDES THE FOLLOWING:</u>			
	SIGNAL HEADS	EA	12	
	LUMINAIRES	EA	3	
	SIGNAL CONTROLLER CABINET	EA	1	
	CONDUIT AND PULL BOXES	LS	1	
	FIRE PREEMPTION UNIT AND TIMER	EA	1	
	STREET SIGNS	EA	3	
202-00840	REMOVAL OF TRAFFIC SIGNAL POLE	EA	3	
202-00858	REMOVAL OF PEDESTAL POLE	EA	1	

NOTES

- CONTRACTOR'S OPERATIONS SHALL PROTECT EXISTING BOLLARDS, UTILITY LIDS, ELECTRICAL PULL BOX LIDS, LIGHT POLE BASES, CONCRETE PAVEMENT, GUARDRAIL, CURB AND GUTTER, FENCE, AND PARKING CONTROL EQUIPMENT FROM DAMAGE.
- ALL EXISTING SIGNAL POLE CAISSONS SHALL BE REMOVED 2- FEET BELOW EXISTING GRADE. ALL WORK NECESSARY TO REMOVE AND DISPOSE OF MATERIAL SHALL BE INCLUDED IN THE WORK.
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND DIA DOES NOT GUARANTEE THEIR ACCURACY. CONTRACTOR IS RESPONSIBLE TO DETERMINE DEPTH AND LOCATIONS OF ALL UTILITIES PRIOR TO DISTURBANCE.



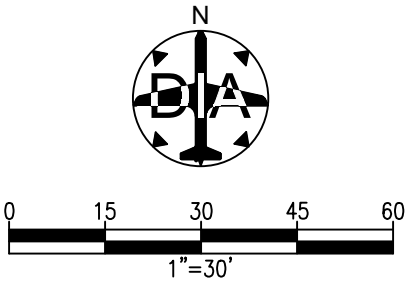
Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			 <div>DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340</div>	As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 08 - 2013XXXXXINTRM02.dwg		Date:	Comments	Init.		No Revisions:		78TH / LANDSIDE LOT REMOVALS				
Horiz. Scale: N/A Vert. Scale: N/A						Revised:	Designer: GMF	Structure Numbers				
Unit Leader: MHS							Detailer: MWC					
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory						Void:	Sheet Subset: ROADWAY	Subset Sheets: 2 of 4		Sheet Number 8		




TABULATION OF REMOVALS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
202-00195	REMOVAL OF MEDIAN COVER	SY	36	
202-00250	REMOVAL OF PAVEMENT MARKINGS	SF	160	
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	1	
	FOR INFORMATION ONLY INCLUDES THE FOLLOWING:			
	SIGNAL HEADS	EA	11	
	LUMINAIRES	EA	1	
	SIGNAL CONTROLLER CABINET	EA	1	
	CONDUIT AND PULL BOXES	LS	1	
	VIDEO DETECTION CAMERA	EA	3	
	STREET SIGNS	EA	8	
202-00840	REMOVAL OF TRAFFIC SIGNAL POLE	EA	3	
202-00858	REMOVAL OF PEDESTAL POLE	EA	1	
210-00815	RESET SIGN PANEL	EA	2	

NOTES

- CONTRACTOR'S OPERATIONS SHALL PROTECT EXISTING BOLLARDS, UTILITY LIDS, ELECTRICAL PULL BOX LIDS, LIGHT POLE BASES, CONCRETE PAVEMENT, GUARDRAIL, CURB AND GUTTER, FENCE, AND PARKING CONTROL EQUIPMENT FROM DAMAGE.
- ALL EXISTING SIGNAL POLE CAISSONS SHALL BE REMOVED 2- FEET BELOW EXISTING GRADE. ALL WORK NECESSARY TO REMOVE AND DISPOSE OF MATERIAL SHALL BE INCLUDED IN THE WORK.
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND DIA DOES NOT GUARANTEE THEIR ACCURACY. CONTRACTOR IS RESPONSIBLE TO DETERMINE DEPTH AND LOCATIONS OF ALL UTILITIES PRIOR TO DISTURBANCE AND REMOVALS.
- SIGN PANELS LOCATED ON THE SW AND SE SIGNAL POLES SHALL BE RESET ON NEW TRAFFIC SIGNAL POLES. REFER TO TABULATION OF SIGNS ON SHEET 25 FOR FURTHER INFORMATION.



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File Name: 09 - 2013XXXXXINTRM03.dwg						No Revisions:			
Horiz. Scale: N/A						Revised:	Designer: GMF	Structure Numbers	
Unit Leader: MHS							Detailer: MWC		
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory						Void:	Sheet Subset: ROADWAY	Subset Sheets: 3 of 4	Sheet Number 9

TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, DIA HAS PROVIDED THE FOLLOWING INFORMATION:

- Horizontal Control
Vertical Control
Roadway Alignment
Original Terrain Data
Other: Survey Points and Topo (Incomplete)..... DWG File
- * Specify the information format, ie., plan sheet, computer disk, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

- TYPE OF PROJECT
- Landscaping
Signalization
Safety Improvement
Asphalt Overlay
Concrete Overlay
Minor Widening
- Major Reconstruction
New Roadway Construction
Bridge Replacement
Bridge Widening
New Bridge
Other:

SURVEY WORK TO BE PERFORMED BY OTHERS: Yes

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:

- Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
Verification and Maintenance of Horizontal and Vertical Control
Verify or Determine existing grades and alignments
Verify or Determine existing topography
Clearing and Grubbing Limits (Section 201)
Removal Limits (Section 202)
Reset Items (Section 210)
Excavation and Embankment (Section 203)
Excavation
Unclassified
Stripping
Muck
Rock
Borrow
Other:
Potholing
- Embankment
Site Grading
Erosion Control (Perm)
Other:
As Staked Earthwork Quantities (See General Notes)
- Landscaping
Top Soil (Section 207)
Seeding (Section 212)
Mulching (Section 213)
Planting (Section 214)
Herbicide (Section 217)
Other:

- Erosion Control (Section 208)
Seeding (Temp)
Silt Fence
Erosion Bales
Erosion Logs
Riprap (Temp)
Other: Mulching
- Roadway Bases
Untreated Subgrade
Treated Subgrade
Aggregate Base Course (Section 304)
Reconditioning
PMBB - Plant Mix Bituminous Base
Other:

- Pavements
HMA - Hot Mix Asphalt (Section 403)
Concrete (Section 412)
Heating & Scarifying Treatment
Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
Seal Coat or Chip Seal (Section 409)
Other:

- Roadway Elements
Curb and Gutter (Section 609)
Drop inlets - alignment and grades (Section 604)
Retaining Walls
Guard Rail (Section 606)
Sidewalk (Section 608)
Overlay Stationing
Other: MEDIAL LINES

- Riprap (Perm) (Section 506)
Slope and Ditch Paving (Section 507)
- Minor Structures
Structure Excavation limits (Section 206)
Culverts (Section 603)
Culverts w/ Headwalls and Wingwalls (Section 601)
Concrete Box Culverts w/ Headwalls and Wingwalls
Pipes (Section 603)
Sanitary Sewer
Storm Sewer
Water
Irrigation
Miscellaneous
Manholes (Section 604)
Inlets (Section 604)
Permanent Water Quality BMP (Dryswale, Media Filter Drain) (Section 208)
Other:

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
Structure Excavation limits (Section 206)
Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
Piling locations and cut off elevations (Section 502)
Caisson locations and elevations (Section 503)
Footing locations, alignment, and elevations
Abutment/Pier locations, alignment, and elevations

Roadway Bases	Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

Pavements	Grid (Y/N)	Special Interval	Special Offset
	YES	50 FT	-
	-	-	-
	-	-	-
	-	-	-

Curb & Gutter	Tangent Interval	Curve Interval	Special Offset
	-	-	-

Stationing	Left Interval	Center Interval	Right Interval
		-	

- Wingwall skew angles/offsets
Structural concrete form locations
Substructure As-constructed survey required for Bridges (Subsection 601 .12) and Overhead signs (S-614-50)
Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
Deck grades at Girder 10th or "n" th point locations and elevations
Slope and Ditch Paving (Section 507)
Other:

- Fencing (Section 607)
Temporary
Permanent
Sound Barrier
Other:

- Delineators (Section 612)
Temporary
Permanent

- Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
Signal pole locations and elevations
Light pole locations and elevations
Sign locations
Field verify sign post locations, elevations, and lengths before fabrication.
Other:

- Pavement Marking (Section 627)
Striping (Temp)
Striping (Perm)
Symbols
Other:

- Temporary Lighting and Construction Traffic Control Devices (Section 630)
Signal pole locations and elevations (Temp)
Light pole locations and elevations (Temp)
Sign Locations (Temp)
Other:

- Easements (Temp Staking by P.L.S. Only)
Right of Way (Temp Staking by P.L.S. Only)

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 629:

- Monumentation (Section 629)
Control
Right of Way
Land corners, Aliquot corners
Easements
Reference the specified existing monuments: **
Replace the specified existing monuments: **
Locate monuments. It is estimated __hours are required.

NOTE: All 629 items shall include adequate research, calculations, and evaluations of evidence for monuments to be set.
** A Tabulation of Survey Monuments may be provided on the plans.

Print Date: 2/1/2013	<div></div> <div></div> <div></div> <div></div> <div></div>	Sheet Revisions			 <div>DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340</div>	As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 11 - 2013XXXXXSUTB01.dwg		Date:	Comments	Init.		No Revisions:		SURVEY TABULATION				
Horiz. Scale: N/A Vert. Scale: N/A						Revised:	Designer: GMF Detailer: MWC	Structure Numbers				
Unit Leader: MHS												
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory						Void:	Sheet Subset: ROADWAY	Subset Sheets: 1 of 1	Sheet Number 11			

SURVEY GENERAL NOTES:

1.

Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDOT Survey Manual.
2.

Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
3.

The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer 3 days prior to the Presurvey Conference – Construction Survey.
4.

Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
5.

The Contractor shall furnish an As Staked earthwork quantity to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDOT Survey Manual. A printed copy of the As Staked earthwork data and a computer disk in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
6.

Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
7.

The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
8.

The Contractor shall coordinate construction staking on the project with any utility work.
9.

Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
10.

The Contractor's surveyor shall submit the following fieldbooks to the Engineer:

☐ Horizontal Control (Primary & Secondary)

☐ Vertical Control (i.e. Benchmarks)

☐ Property Pin Ties

☐ Horizontal Alignment

☐ Grading

☐ Slope Staking

☐ Minor Structures

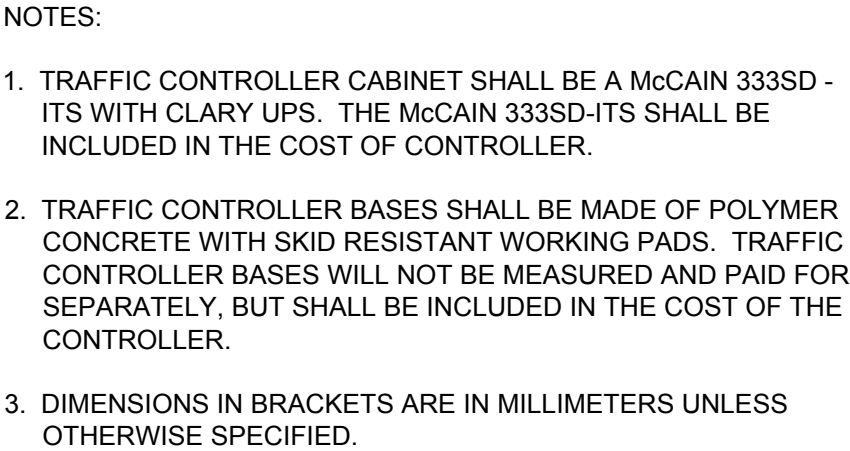
☐ Major Structures

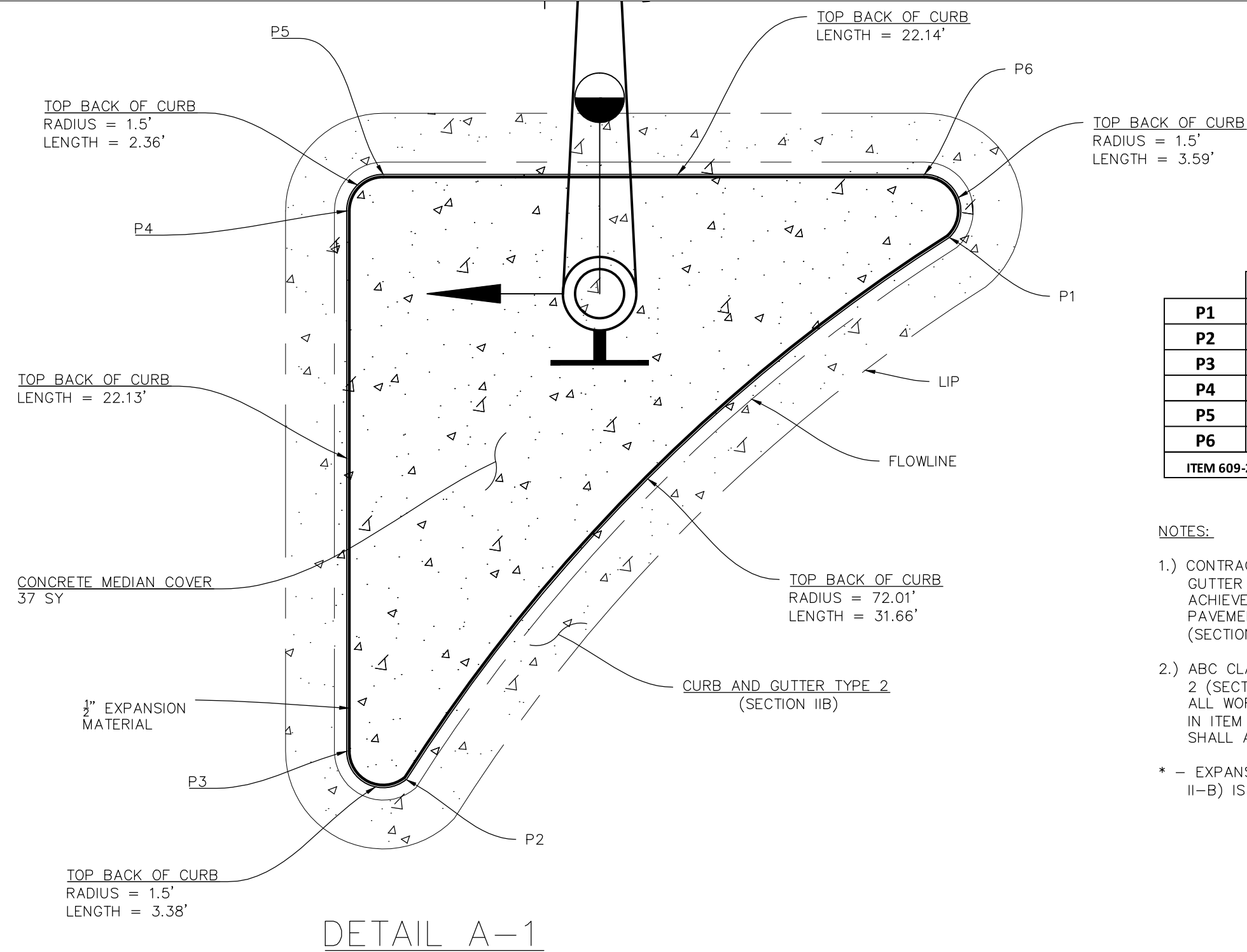
☐ One fieldbook for each work category shown on this sheet

☒ Other Fieldbook(s): GENERAL
11.

The datum(s) to be used in this project shall be: Horizontal Datum–NAD83; Vertical Datum–NAVD88.

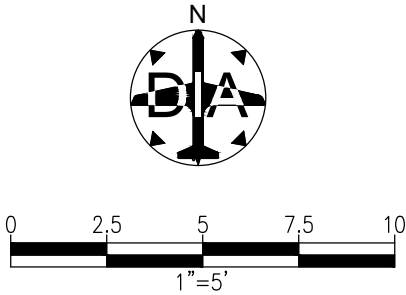
Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div>DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340</div></div>	As Constructed	78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.
File Name: 12 - 2013XXXXXSUGN01.dwg		Date:	Comments	Init.		No Revisions:	SURVEY GENERAL NOTES			
Horiz. Scale: N/A						Revised:	Designer: GMF	Structure Numbers		
Unit Leader: MHS						Void:	Detailer: MWC			
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory							Sheet Subset: ROADWAY	Subset Sheets: 1 of 1	Sheet Number	12

The seal of the City and County of Denver is a circular emblem. It features a central shield with a mountain range, a river, and a plow. Above the shield is a banner with the word "PACIFIC". The shield is flanked by two figures: a Native American on the left and a Minuteman on the right. The words "CITY AND COUNTY OF DENVER" are inscribed around the top half of the circle, and "SEAL" is at the bottom.



	RADIUS (FT)	NORTHING	EASTING	LENGTH (FT)
P1	72.01	186479.79	591518.37	31.66
P2	1.50	186457.59	591496.15	3.38
P3		186458.75	591493.70	22.13
P4	1.50	186480.88	591493.70	2.36
P5		186482.38	591495.20	22.14
P6	1.5	186482.38	591517.35	3.59
ITEM 609-21020 : CURB AND GUTTER TYPE 2 (SECTION IIB) TOTAL =				85

- NOTES:
- 1.) CONTRACTOR SHALL REMOVE FULL DEPTH CONCRETE PAVEMENT WHERE CURB AND GUTTER TYPE 2 (SECTION IIB) IS SHOWN. A NEAT SAW CUT LINE SHALL BE ACHIEVED TO THE DIMENSIONS SHOWN. SAWCUTTING AND REMOVAL OF CONCRETE PAVEMENT SHALL BE INCLUDED IN PAY ITEM 609-21020 CURB AND GUTTER TYPE 2 (SECTION II-B)
- 2.) ABC CLASS 6 SHALL BE USED FOR BASE UNDER THE NEW CURB AND GUTTER TYPE 2 (SECTION IIB) UP TO THE DIMENSIONS SPECIFIED IN THE CDOT M&S STANDARDS. ALL WORK NECESSARY TO COMPLETE ABC CLASS 6 PLACEMENT SHALL BE INCLUDED IN ITEM 609-21020 CURB AND GUTTER TYPE 2 (SECTION II-B). CONTRACTOR SHALL ASSUME THE EXISTING CONCRETE PAVEMENT IS 11-INCHES IN DEPTH.
- * - EXPANSION MATERIAL MAYBE OMITTED IF THE CURB AND GUTTER TYPE 2 (SECTION II-B) IS POURED MONOLITHICALLY WITH THE CONCRETE MEDIAN COVER.



1. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

A. POTENTIAL POLLUTANT SOURCES

1. Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place any BMP's required to contain potential pollutants.

B. BEST MANAGEMENT PRACTICES (BMP's) FOR STORMWATER POLLUTION PREVENTION

NARRATIVES

EROSION LOGS

Erosion logs are used to capture and filter sediment laden run-off from disturbed areas during construction. Erosion logs shall be installed per M&S Standard Plan 208.

CONCRETE

It is anticipated that a fabricated concrete washout structure will be required.

Concrete/debris from removal operations shall not be stockpiled on the project site. Spoils/concrete/debris shall be picked up and disposed of properly to an off site location at the end of each day.

Removal of spoils, concrete, debris and waste shall not be paid for separately but will be included in the cost of work.

SAW CUTTING

Any residue from saw cutting operations shall be picked up and disposed of properly to an off site location.

- The contractor shall develop and implement a plan for saw cutting containment to be approved by the Engineer.
- The contractor shall protect all storm drain facilities adjacent to locations where pavement cutting operations involving wheel cutting, saw cutting, sand blasting or abrasive water jet blasting are to take place. BMP's shall be approved by the Engineer and paid for at the contract unit price.

C. OFFSITE DRAINAGE (RUN ON WATER)

1. Place BMP's to address run-on water in accordance with subsection 208.03.

D. PERIMETER CONTROL

1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters.
2. Perimeter control may consist of vegetation buffers, berms, silt fence, erosion logs, existing landforms, or other BMP's as approved.
3. Perimeter control shall be in accordance with subsection 208.04.

2. DURING CONSTRUCTION

RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION

The SWMP should be considered a "living document that is continuously reviewed and modified. During construction, the following items shall be added, updated, or amended as needed by the Contractor in accordance with Section 208.

- A. MATERIALS HANDLING AND SPILL PREVENTION - Prior to construction commencing the Contractor shall submit a Spill Prevention, Control and Countermeasure Plan, see DIA Technical Specification Division I - Section 1566.
- B. CONCRETE WASHOUT - Concrete washout shall be a fabricated structure, in accordance with subsection 208.02(k).
- C. SAW CUTTING - shall be in accordance with subsection 208.04 (g) and 208.05 (j). See narrative.
- D. STREET SWEEPING - shall be in accordance with subsection 208.04 (f).
- E. VEHICLE TRACKING - shall be in accordance with subsection 208.04.

3. INTERIM AND FINAL STABILIZATION


- A. SEEDING PLAN - seeding and blanket shall be as directed by the engineer. Soil preparation, seeding (native), and soil retention blanket will be required on disturbed areas around new signal poles. The following types and rates shall be used:

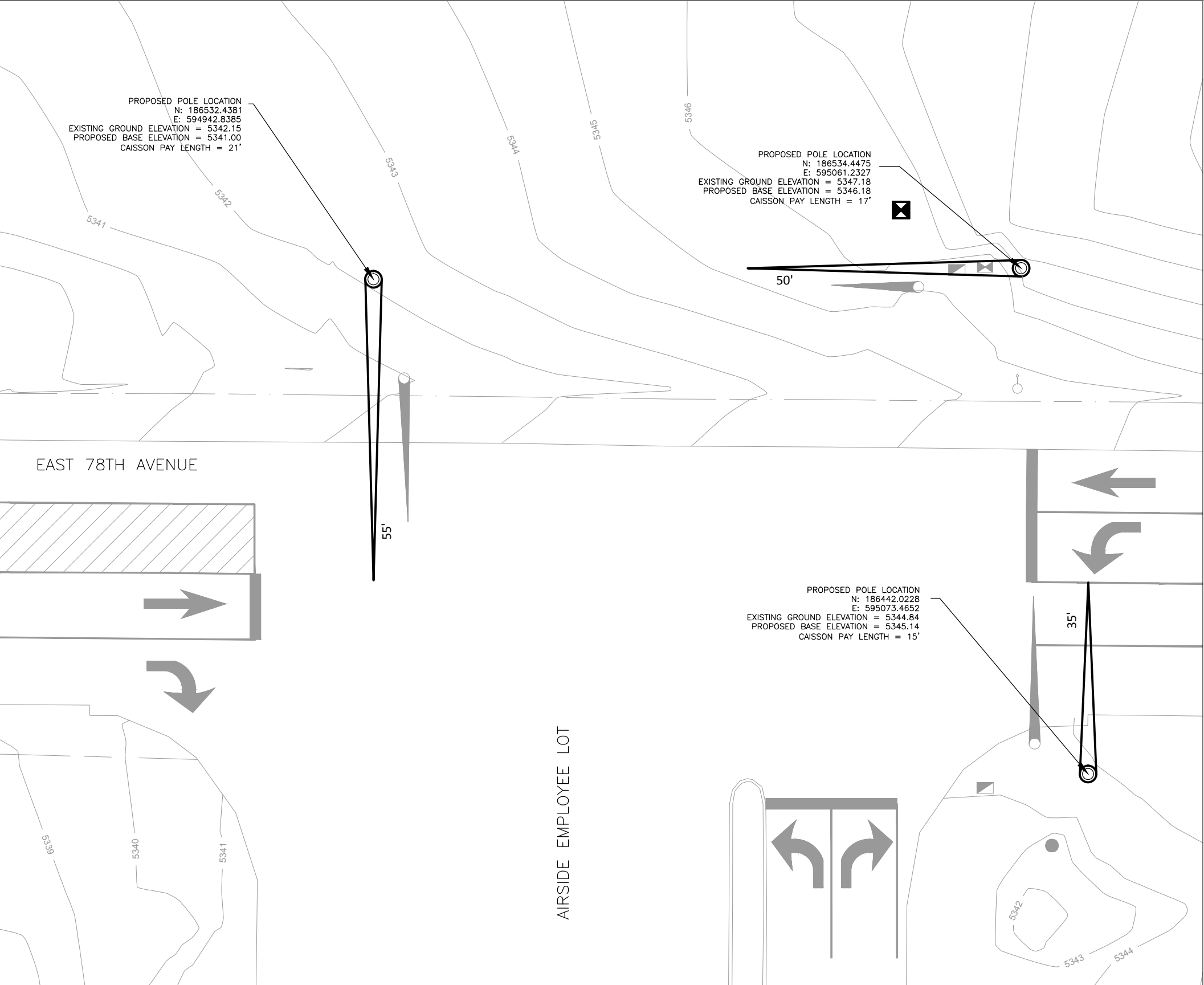
COMMON NAME	BOTANICAL NAME	APPLICATION RATE
		POUNDS PLS/ACRE
WESTERN WHEATGRASS	<i>Pascopyrum smithii "Arriba"</i>	8
SIDEOATS GRAMA	<i>Bouteloua curtipendula "Vaughn"</i>	3
GREEN NEEDLEGRASS	<i>Nassella viridula "Lodorm"</i>	2
BUFFALOGRASS	<i>Buchloe dactyloides "Texoka"</i>	5
BLUE GRAMA	<i>Bouteloua gracilis "Hachita"</i>	1
LITTLE BLUESTEM	<i>Schizachyrium scoparium "Pastura"</i>	1.5
PRAIRIE JUNEGRASS	<i>Koeleria macrantha</i>	0.2
PURPLE PRAIRIE CLOVER	<i>Dalea purpureum var. purpureum</i>	0.5
GAILLARDIA	<i>Gaillardia aristata</i>	1
PRAIRIE CONEFLOWER	<i>Ratibida columnaris</i>	0.2
OATS	<i>Avena sativa</i>	3
TOTAL		25.4

- B. SEEDING APPLICATION: Hand broadcast and rake 0.25 inch to 0.5 inch into soil.
- C. SOIL RETENTION BLANKET (STRAW/COCONUT): All seeded areas shall receive blanket.
- D. SPECIAL REQUIREMENTS: Due to high failure rates, hydromulching and/or hydroseeding will not be allowed.

4. TABULATION OF STORMWATER QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
208	GRAVEL BAGS	LF	100
208	CONCRETE WASHOUT STRUCTURE	EA	2
208	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR)	Hour	16
208	SEDIMENT CONTROL LOGS	LF	800
212	SEEDING (NATIVE)	Acre	0.25
216	SOIL RETENTION BLANKET (STRAW/COCONUT)	SY	1210

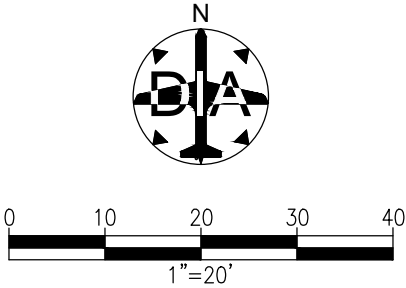
Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions				DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340	As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 16 - 2013XXXXXECPL01.dwg		Date:	Comments	Init.			No Revisions:		STORMWATER MANAGEMENT PLAN				
Horiz. Scale: N/A Vert. Scale: N/A							Revised:	Designer: GMF Detailer: MWC	Structure Numbers				
Unit Leader: MHS													
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory							Void:	Sheet Subset: ROADWAY	Subset Sheets: 1 of 1	Sheet Number 15			



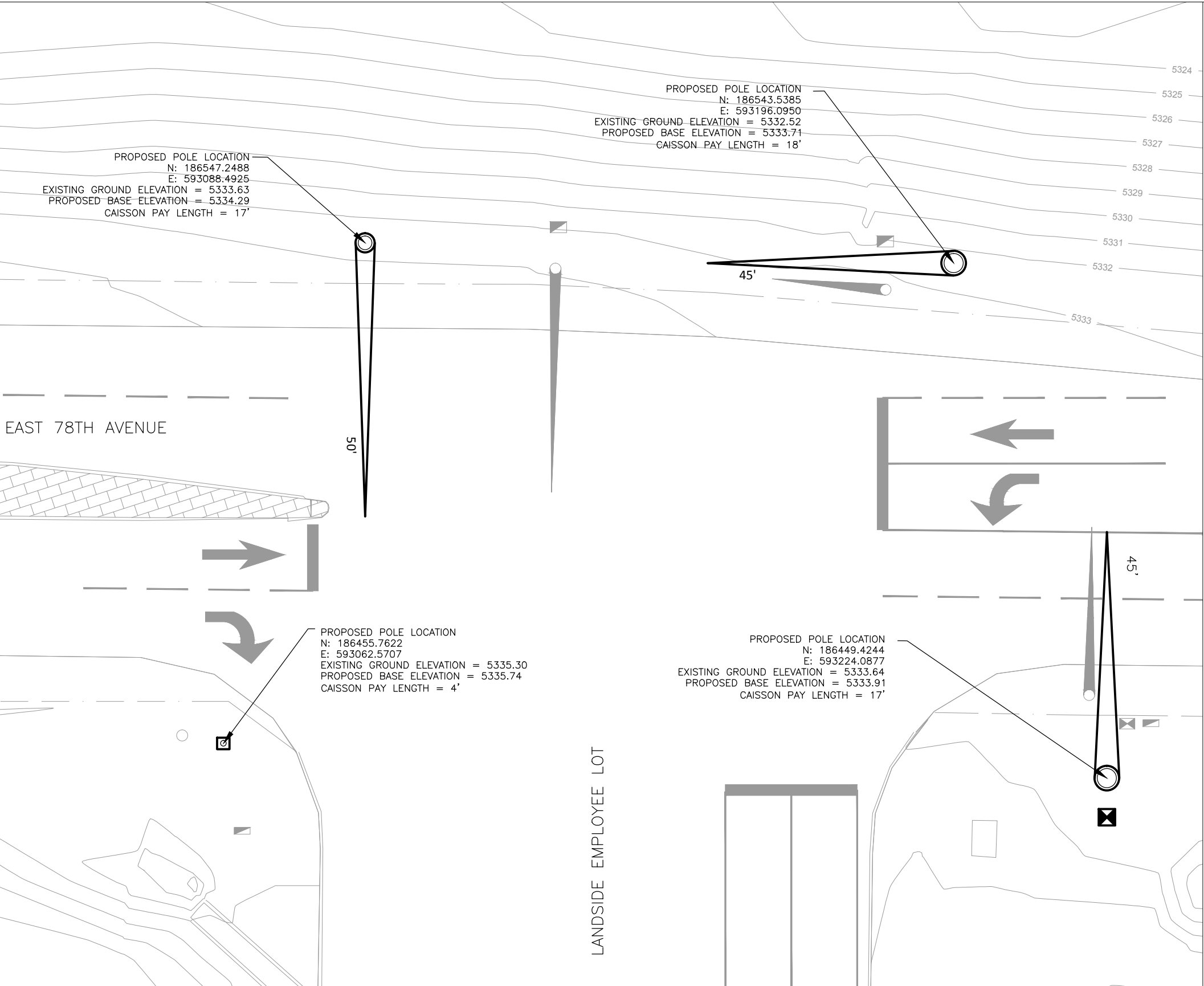
LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- EXISTING SIGNAL CONTROLLER CABINET
- EXISTING TRAFFIC PULL BOX

PROPOSED POLE LOCATION		EXISTING GROUND ELEVATION	PROPOSED BASE ELEVATION	PROPOSED TOP OF POLE ELEVATION
N: 186532.4381	E: 594942.8385	5342.15	5341.00	5380.00
N: 186534.4475	E: 595061.2327	5347.18	5346.18	5385.18
N: 186442.0228	E: 595073.4652	5344.84	5345.14	5384.14



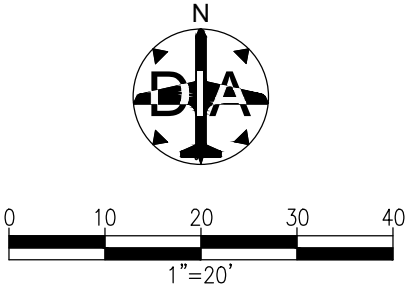
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File Name: 17 - 2013XXXXXINTPL01.dwg		Date:	Comments	Init.		No Revisions:	AIRSIDE POLE LOCATION PLAN			
Horiz. Scale: N/A						Revised:	Designer: GMF	Structure Numbers		
Unit Leader: MHS						Void:	Detailer: MWC			
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LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- PROPOSED PEDESTAL POLE
- EXISTING SIGNAL CONTROLLER CABINET
- EXISTING TRAFFIC PULL BOX

PROPOSED POLE LOCATION		EXISTING GROUND ELEVATION	PROPOSED BASE ELEVATION	PROPOSED TOP OF POLE ELEVATION
N: 186547.2488	E: 593088.4925	5333.63	5334.29	5373.29
N: 186543.5385	E: 593196.0950	5332.52	5333.71	5372.71
N: 186455.7622	E: 593062.5707	5335.30	5335.74	5353.74
N: 186449.4244	E: 593224.0877	5333.64	5333.91	5372.91



Print Date: 2/1/2013

File Name: 18 - 2013XXXXXINTPL02.dwg

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Unit Leader: MHS

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Sheet Revisions

Date:	Comments	Init.



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As Constructed

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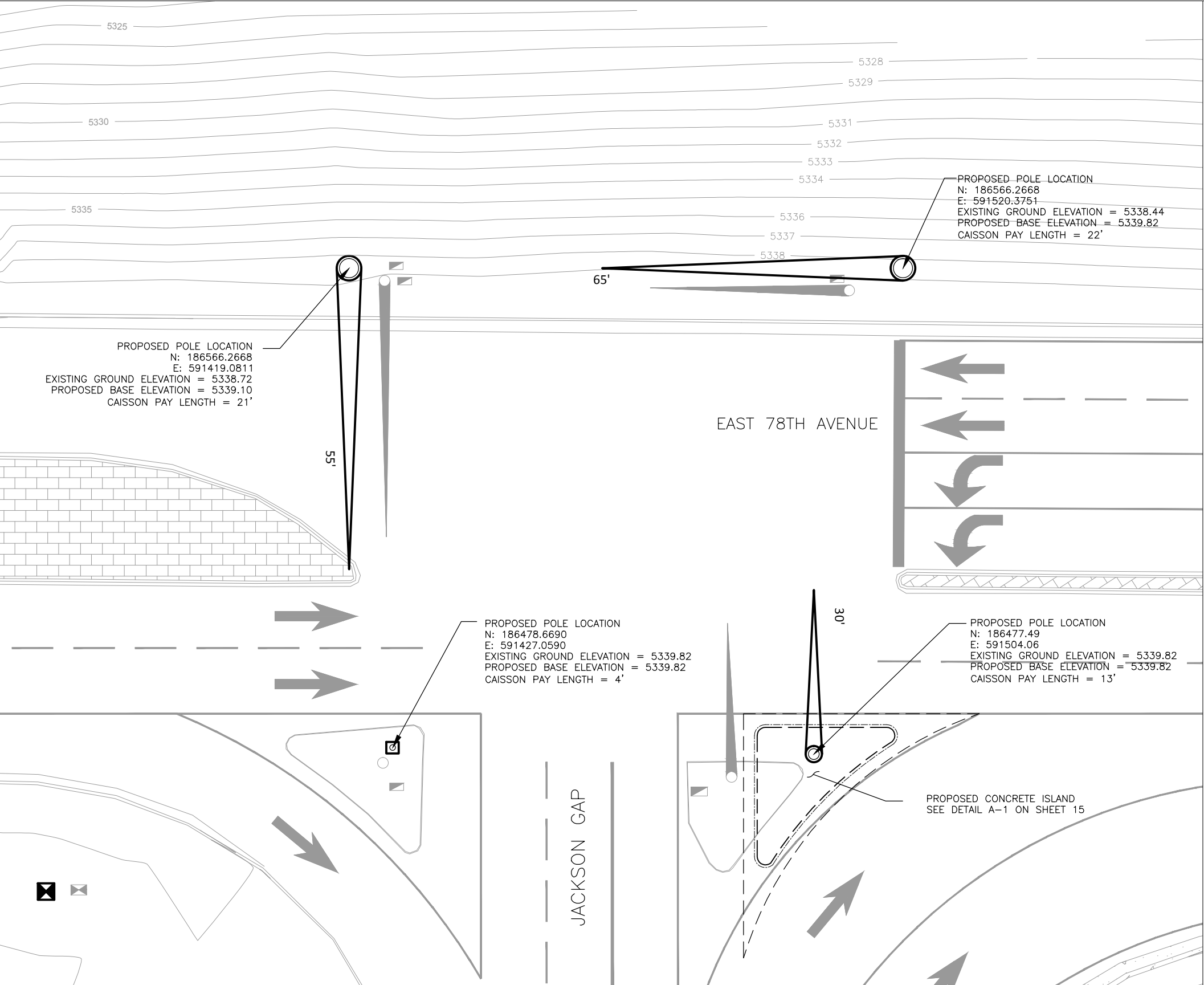
78TH AVE TRAFFIC SIGNAL REPLACEMENT
LANDSIDE POLE LOCATION PLAN

Designer: GMF
Detailer: MWC
Sheet Subset: ROADWAY

Structure Numbers
Subset Sheets: 2 of 5

Const. Contract No.

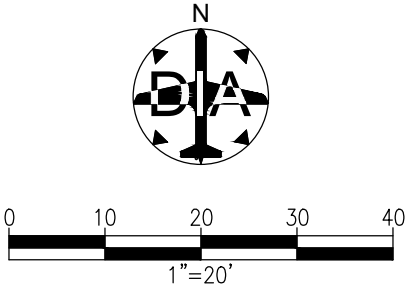
Sheet Number 17



LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- PROPOSED PEDESTAL POLE
- EXISTING SIGNAL CONTROLLER CABINET
- EXISTING TRAFFIC PULL BOX

PROPOSED POLE LOCATION		EXISTING GROUND ELEVATION	PROPOSED BASE ELEVATION	PROPOSED TOP OF POLE ELEVATION
N: 186566.2668	E: 591419.0811	5338.72	5339.10	5378.10
N: 186566.2668	E: 591520.3751	5338.44	5339.82	5378.82
N: 186478.6690	E: 591427.0590	5339.82	5339.82	5357.82
N: 186477.4900	E: 591504.0600	5339.82	5339.82	5378.82



Print Date: 2/1/2013

File Name: 19 - 2013XXXXXINTPL03.dwg

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Unit Leader: MHS

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Sheet Revisions

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8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed

No Revisions:

Revised:

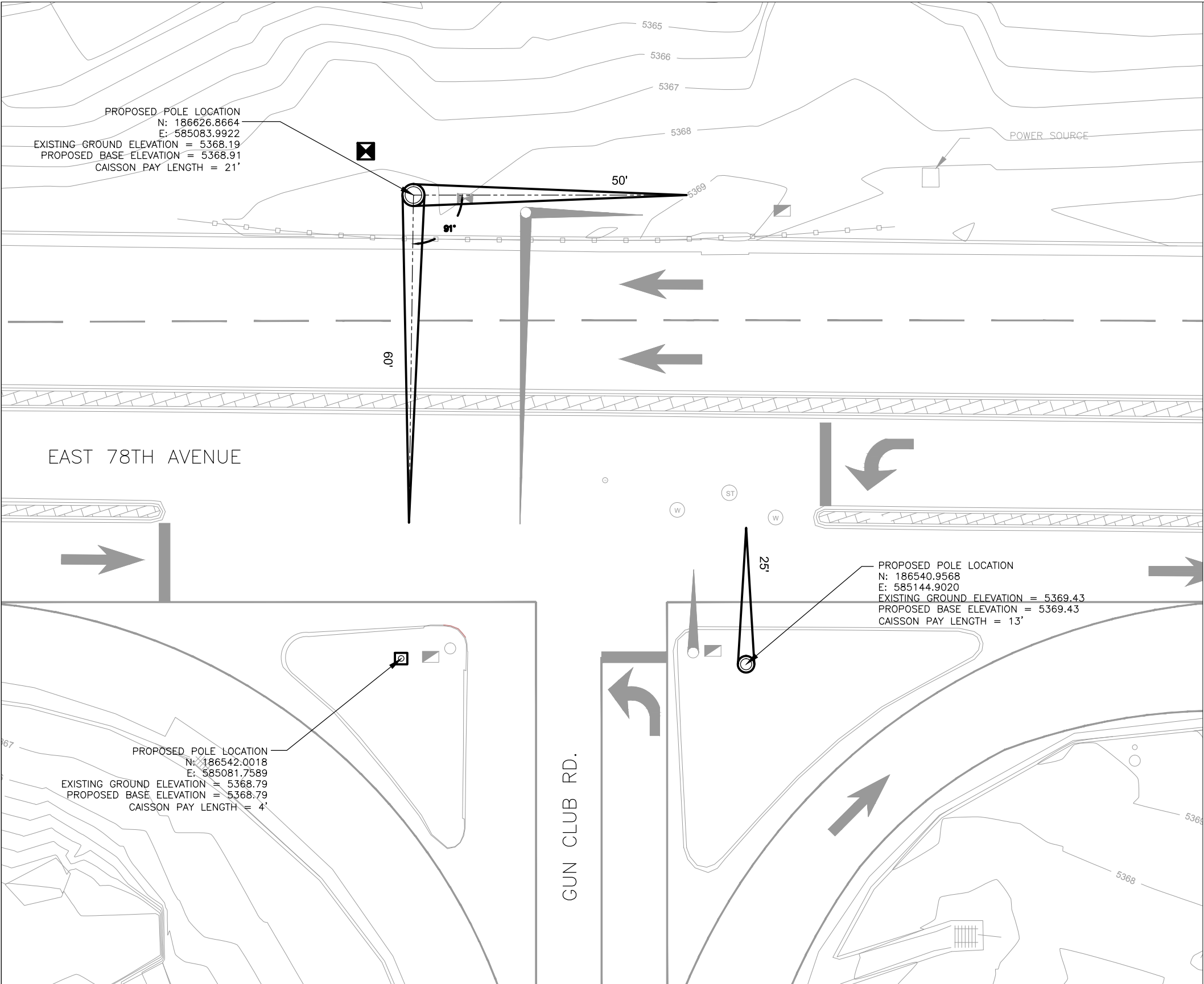
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78TH AVE TRAFFIC SIGNAL REPLACEMENT
JACKSON GAP POLE LOCATION PLAN

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Detailer: MWC	
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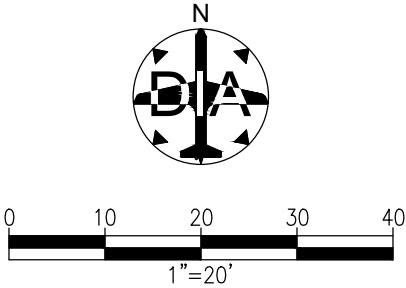
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LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- PROPOSED PEDESTAL POLE
- EXISTING SIGNAL CONTROLLER CABINET
- EXISTING TRAFFIC PULL BOX

PROPOSED POLE LOCATION		EXISTING GROUND ELEVATION	PROPOSED BASE ELEVATION	PROPOSED TOP OF POLE ELEVATION
N: 186626.8664	E: 585083.9922	5368.19	5368.91	5407.91
N: 186542.0018	E: 585081.7589	5368.79	5368.79	5386.79
N: 186540.9568	E: 585144.9020	5369.43	5369.43	5408.43

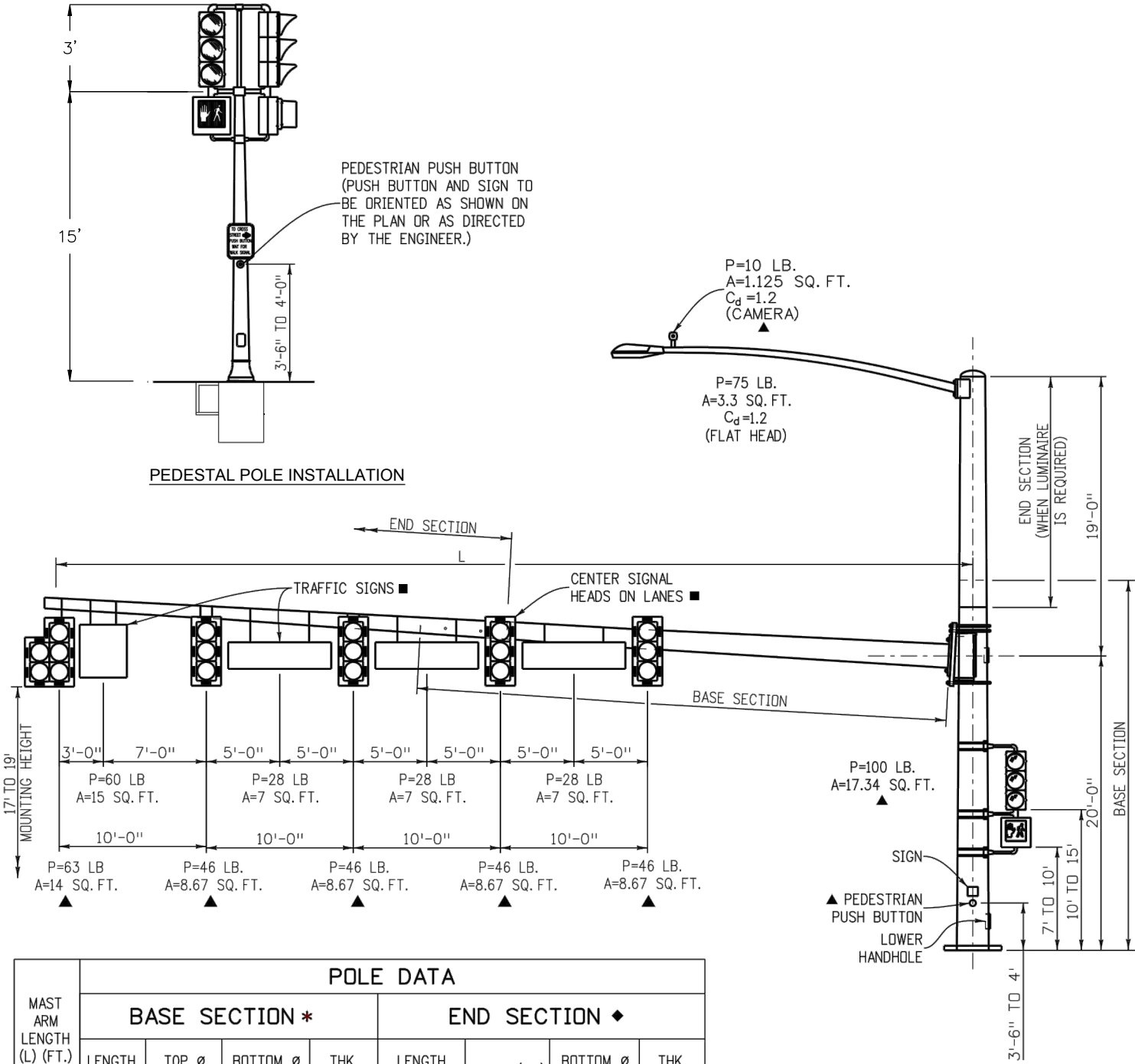


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File Name: 20 - 2013XXXXXINTPL04.dwg		Date:	Comments	Init.		No Revisions:		GUN CLUB POLE LOCATION PLAN			
Horiz. Scale: N/A Vert. Scale: N/A						Revised:		Designer: GMF	Structure Numbers		
Unit Leader: MHS						Void:		Detailer: MWC			
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory								Sheet Subset: ROADWAY	Subset Sheets: 4 of 5	Sheet Number 19	
		DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340									

PROPOSED POLE LOCATION		EXISTING GROUND ELEVATION	PROPOSED BASE ELEVATION	PROPOSED TOP OF POLE ELEVATION	BASE TO TOP OF POLE (FEET)
N:	E:				
E 78TH AVE & AIRSIDE EMPLOYEE LOT					
186532.4381	594942.8385	5342.15	5341.00	5380.00	39
186534.4475	595061.2327	5347.18	5346.18	5385.18	39
186442.0228	595073.4652	5344.84	5345.14	5384.14	39
E 78TH AVE & LANDSIDE EMPLOYEE LOT					
186547.2488	593088.4925	5333.63	5334.29	5373.29	39
186543.5385	593196.0950	5332.52	5333.71	5372.71	39
186455.7622	593062.5707	5335.30	5335.74	5353.74	18 (PEDESTAL POLE)
186449.4244	593224.0877	5333.64	5333.91	5372.91	39
E 78TH AVE & JACKSON GAP ST					
186566.2668	591419.0811	5338.72	5339.10	5378.10	39
186566.2668	591520.3751	5338.44	5339.82	5378.82	39
186478.6690	591427.0590	5339.82	5339.82	5357.82	18 (PEDESTAL POLE)
186477.4900	591504.0600	5339.82	5339.82	5378.82	39
E 78TH AVE & GUN CLUB RD					
186626.8664	585083.9922	5368.19	5368.91	5407.91	39
186542.0018	585081.7589	5368.79	5368.79	5386.79	18 (PEDESTAL POLE)
186540.9568	585144.9020	5369.43	5369.43	5408.43	39

NOTES:

1. SEE CDOT M & S STANDARD S-614-40A AND S-614-41 FOR ADDITIONAL POLE INSTALLATION DETAILS.



* BASE SECTION LENGTHS INCLUDE THE SPLICE LENGTH AS PER THE "MAST ARM SLIP SPLICE DETAIL" ON SHEET 2 OF 4

TRAFFIC SIGNAL POLE INSTALLATION

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File Name: 22 - 2013XXXXXINTPL05.dwg		Date:	Comments	Init.		No Revisions:		SIGNAL POLE DETAIL			
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Unit Leader: MHS						Void:		Detailer: MWC			
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements								Sheet Subset: ROADWAY	Subset Sheets: 5 of 5		Sheet Number 20

SCHEDULE OF TRAFFIC CONTROL ITEMS

SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES					
Sign Code	Legend	Dimensions	Panel Size		
			A	B	C
			EA	EA	EA
R52-6a	BEGIN / FINES / DOUBLE / IN WORK / ZONE	36"x48"		4	
W4-2	LANE ENDS TRANSITION	48"x48"		4	
W20-5	LEFT / RIGHT /CENTER LANE/ CLOSED / AHEAD	48"x48"		4	
W20-7	FLAGGER (SYMBOL)	48" X 48"		4	
SPECIAL	TRUCKS / ENTERINING / & LEAVING / ROADWAY	48" X 48"		4	
W20-1	ROAD / WORK / AHEAD	48"x48"		4	
R2-1(35)	SPEED / LIMIT / 35	36"x48"		4	
R52-6B	END / FINES / DOUBLE / IN WORK / ZONE	36"x48"		4	
G20-5	WORK ZONE	36" X 12"	4		
TOTALS			4	32	0

TABULATION OF TRAFFIC ENGINEERING ITEMS			
Item Number	Item Description	Unit	Project Totals
630-00000	FLAGGING	HR	300
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	40
630-80341	CONSTRUCTION TRAFFIC SIGN (A)	EA	4
630-80342	CONSTRUCTION TRAFFIC SIGN (B)	EA	32
630-80358	SEQUENCING ARROW PANEL (TYPE C)	EA	2
630-80380	TRAFFIC CONE	EA	100

CONSTRUCTION TRAFFIC NOTES

1. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ROAD APPROACHES AND BUSINESSES DURING ALL PHASES OF CONSTRUCTION AT NO ADDITIONAL COST TO THE PROJECT.
2. CONTRACTOR SHALL MASK ALL SIGNS CONFLICTING WITH CONSTRUCTION SIGNING.
3. IT IS ESTIMATED THAT THIS PROJECT WILL REQUIRE 40 TRAFFIC CONTROL MANAGEMENT DAYS.
4. ALL CONSTRUCTION SIGNS SHALL BE REMOVED AT THE END OF THE WORKING DAY. CONSTRUCTION SIGNS SHALL ONLY BE ERECTED WHEN WORK IS BEING PERFORMED WITHIN THE CLEAR ZONE.
5. THERE SHALL BE NO STOCKPILING OR SIDE CASTING OF WASTE MATERIALS INCLUDING BUT NOT LIMITED TO PREFORMED THERMOPLASTIC PAVEMENT MARKINGS, PAINT CHIPS, ASPHALT AND CONCRETE ADJACENT TO ANY DRAINAGE WAYS (INCLUDING DRY DRAINAGE WAYS), THAT COULD POTENTIALLY RESULT FROM PROJECT ACTIVITIES. CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL OFF SITE OUTSIDE DENVER INTERNATIONAL AIRPORT PROPERTY.

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File Name: 21 - 2013XXXXXTCTB01.dwg		Date:	Comments	Init.		No Revisions:		SCHEDULE OF TRAFFIC CONTROL ITEMS		
Horiz. Scale: N/A Vert. Scale: N/A						Revised:		Designer: GMF	Structure Numbers	
Unit Leader: MHS						Void:		Detailer: MWC		
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DENVER INTERNATIONAL AIRPORT
PLANNING & DEVELOPMENT
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8500 PENA BOULEVARD
DENVER, CO 80249-6340

1. TRAFFIC SIGNAL MATERIALS AND INSTALLATION SHALL COMPLY WITH CDOT 2011 STATE OF COLORADO - STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION; CDOT 2012 M&S STANDARD PLANS; THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION; THE NATIONAL ELECTRIC CODE; AND ALL LOCAL ORDINANCES AND REGULATION THAT APPLY, EXCEPT AS NOTED ON THESE PLANS OR SPECIAL PROVISIONS.

2. THIS ROADWAY IS CLASSIFIED AS RURAL. THE CONTRACTOR SHALL HAVE 1 (ONE) HOUR TO RESPOND FOR TRAFFIC SIGNAL MAINTENANCE.

3. NO EXCAVATION SHALL BE PERMITTED UNTIL UNDERGROUND UTILITIES HAVE BEEN LOCATED TO THE SATISFACTION OF ALL PARTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL AERIAL AND UNDERGROUND UTILITIES. CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES.

4. TRAFFIC CONTROLLER SHALL BE A **170E-HC11** WITH **WAPITI W4IKS SOFTWARE** & UTILITY SOFTWARE TO BE INCLUDED IN THE COST OF THE CONTROLLER ITEM. ALL ELECTRONIC COMPONENTS IN THE 170E CONTROLLER GREATER THAN 14 PINS SHALL BE SOCKETED TYPE. CABINET SHALL BE PLACED ON NEW FOUNDATION, SEE DETAIL. CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE TRAFFIC CONTROLLER PRIOR TO INSTALLATION. PROGRAMMING SHALL BE INCLUDED IN THE COST OF THE CONTROLLER. TRAFFIC CONTROLLER CABINET SHALL BE **MCCAIN 333SD-ITS WITH A CLARY SP-1250LX UPS**, . THE MCCAIN 333SD-ITS SHALL BE INCLUDED IN THE COST OF THE CONTROLLER.

5. MAST ARMS SHALL BE OF SUFFICIENT LENGTH TO ALLOW ALL SIGNAL HEADS TO BE CENTERED OVER THE LANES. TRAFFIC SIGNAL POLE LOCATIONS SHALL BE STAKED IN THE FIELD AND FIELD VERIFIED BY DIA LANDSIDE ENGINEERING (GLENN FRIELER P.E. 303-342-2933) PRIOR TO DRILLING, SETTING THE FOUNDATIONS AND ORDERING THE MAST ARMS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL ELECTRIC UTILITY TO UPGRADE ELECTRICAL SERVICE AND METER TO NEC SPECIFICATIONS. WORK SHALL BE INCLUDED UNDER PAY ITEM 700-70034 FORCE ACCOUNT MISCELLANEOUS CONTRACT ITEM.

7. MEASUREMENT AND PAYMENT OF TRAFFIC SIGNAL CONSTRUCTION ITEMS SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

8. ALL ITEMS NOT SHOWN IN THE SUMMARY OF APPROXIMATE QUANTITIES SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF TRAFFIC SIGNALS AND WILL NOT BE MEASURED AND PAID SEPARATELY. ALL QUANTITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO COMPLETE THE CONSTRUCTION SHOWN ON THESE PLANS.

9. SHOULD CONTRACTOR INCUR WATER IN CAISSON, ANY DE-WATERING METHODS AND NECESSARY PERMITS SHALL BE INCLUDED IN THE COST OF THE CAISSON.

10. ALL CONDUIT SHALL HAVE A PULL ROPE LEFT IN THEM WHEN CONSTRUCTION IS COMPLETED. ALL CONDUIT AND FITTINGS SHALL BE SCHEDULE 80 PVC.

11. ALL CONDUIT UNDER EXISTING ROADWAYS SHALL BE DIRECTIONALLY BORED A MINIMUM OF 3' BELOW EXISTING PAVEMENT. THIS WORK SHALL AVOID DISTURBING OR DAMAGING ALL ROADWAY PROPERTY, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROMPT RECONSTRUCTION, ALTERATION, REPAIR OR MAINTENANCE OF DIA PROPERTY, AS NECESSARY, TO REPAIR ANY DAMAGE CAUSED BY THE ACCOMMODATION OF THE UTILITY, AND TO RESTORE THE PROPERTY TO PRE-EXISTING OR BETTER CONDITIONS.

12. TRAFFIC SIGNALS THAT ARE MOUNTED ON MAST ARMS SHALL HAVE A LOUVERED BACK PLATE, BLACK IN COLOR, INCLUDED IN THE SIGNAL HEAD COST.

13. ALL SIGNAL CABLE SHALL BE CONTINUOUS FROM CONNECTIONS MADE IN THE HAND HOLE COMPARTMENT OF SIGNAL POLE BASE TO THE TERMINAL COMPARTMENT IN THE CONTROLLER CABINET. SPLICING SHALL NOT BE PERMITTED.

14. ELECTRICAL DISCONNECT BOXES SHALL BE PROVIDED AT THE CONNECTION POINT OF EACH POWER SOURCE OR POINT OF SERVICE AS DIRECTED BY THE ENGINEER. DISCONNECT BOXES SHALL BE WEATHER-PROOF, LOCKABLE, AND NEMA TYPE CIRCUIT BREAKER ENCLOSURES.

15. ALL TRAFFIC SIGNAL FACES SHALL HAVE LED OPTICAL UNITS FOR ALL ASPECTS AS PER SECTION 713.11 OF CDOT 2011 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL VEHICLE INDICATIONS SHALL BE 12".

16. SIGNAL HEAD SHALL BE POLYCARBONATE AND YELLOW IN COLOR. SIGNAL HEADS SHALL BE BAGGED WITH A HEAVY BLACK PLASTIC UNTIL READY FOR OPERATION. SIGNAL HEADS SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE HEAD IS 18' FROM THE ROAD SURFACE. MAST ARM SIGNAL HEADS SHALL USE ASTRO-BRAC MOUNTING BRACKETS.

17. ALL SIGNAL MOUNTED LUMINAIRES SHALL BE WIRED 240 WITH MULT-TAP HEADS. ALL LUMINAIRES SHALL HAVE 10 FOOT ARMS WITH **DIALIGHT STREETSENSE LED LUMINAIRES, 120 WATT COOL WHITE** .

18. MICROWAVE DETECTORS SHALL BE **MS SEDCO INTERSECTOR** . LEAD-IN CABLES TO BE CONTINUOUS FROM CONTROLLER TO RADAR UNITS. NO SPLICES WILL BE PERMITTED. RADAR UNITS TO BE MOUNTED PER MANUFACTURES RECOMMENDATIONS AND APPROVED BY DIA PRIOR TO INSTALLATION.

19. CONTRACTOR SHALL COMPLETE ALL WORK NECESSARY FOR THE OPERATION OF THE SYSTEM, AND SHALL CONTACT DIA LANDSIDE EINGEERING, GLENN FRIELER @ 303-342-2933, TO SCHEDULE A COMPLIANCE INSPECTION PRIOR TO FLASH OPERATION. UPON COMPLETION OF THE INSPECTION, THE FIELD OPERATION TESTING SHALL BEGIN. THE COMPLETE TRAFFIC SYSTEM SHALL BE FULLY OPERATIONAL AND FULLY TESTED AT THE COMPLETION OF THE PROJECT FOR FINAL ACCEPTANCE.

20. REMOVAL OF ANY TRAFFIC ITEMS AND EQUIPMENT NOT REUSED SHALL BECOME PROPERTY OF THE CONTRACTOR. REMOVAL OF SIGNS SHALL BECOME THE PROPERTY OF DIA. CONTACT MICHAEL CLOUD AT 303-342-4457 TO COORDINATE DELIVERY.

21. **AIRSIDE EMPLOYEE LOT & 78TH AVE:** ALL CONDUCTORS SHALL BE COLOR-CODED AND PERMANENTLY TAGGED PER THE FOLLOWING SCHEDULE; KEY-PHASE: COLOR OF SIGNAL LOAD CONDUCTOR, "CODE" (ON TAG AT EACH END OF CONDUCTOR)

1. WESTBOUND (78TH AVE)	RED/WHITE	"X-WB"
2. WESTBOUND (PROTECTED/PERMISSIVE LEFT TURN)	RED	"X-WB"
3. EASTBOUND (78TH AVE)	ORANGE/WHITE	"X-EB"
4. NORTHBOUND (AIRSIDE EMPLOYEE LOT)	BLUE/WHITE	"X-NB"

X= PHASE NUMBER

22. **LANDSIDE EMPLOYEE LOT & 78TH AVE:** ALL CONDUCTORS SHALL BE COLOR-CODED AND PERMANENTLY TAGGED PER THE FOLLOWING SCHEDULE; KEY-PHASE: COLOR OF SIGNAL LOAD CONDUCTOR, "CODE" (ON TAG AT EACH END OF CONDUCTOR)

1. WESTBOUND (78TH AVE)	RED/WHITE	"X-WB"
2. WESTBOUND (PROTECTED/PERMISSIVE LEFT TURN)	RED	"X-WB"
3. EASTBOUND (78TH AVE)	ORANGE/WHITE	"X-EB"
4. NORTHBOUND (LANDSIDE EMPLOYEE LOT)	BLUE/WHITE	"X-NB"

X= PHASE NUMBER

23. CONTRACTOR SHALL WIRE ALL INTERSECTIONS FOR FUTURE PEDESTRIAN SIGNAL FACES AND PEDESTRIAN PUSH BUTTONS. ADDITIONAL WIRING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN PAY ITEM WIRING (LUMP SUM).

24. **JACKSON GAP & 78TH AVE:** ALL CONDUCTORS SHALL BE COLOR-CODED AND PERMANENTLY TAGGED PER THE FOLLOWING SCHEDULE; KEY-PHASE: COLOR OF SIGNAL LOAD CONDUCTOR, "CODE" (ON TAG AT EACH END OF CONDUCTOR)

1. WESTBOUND (78TH AVE)	RED/WHITE	"X-WB"
2. WESTBOUND (PROTECTED/PERMISSIVE LEFT TURN)	RED	"X-WB"
3. EASTBOUND (78TH AVE)	ORANGE/WHITE	"X-EB"
4. NORTHBOUND (JACKSON GAP)	BLUE/WHITE	"X-NB"

X= PHASE NUMBER

25. **GUN CLUB ROAD & 78TH AVE:** ALL CONDUCTORS SHALL BE COLOR-CODED AND PERMANENTLY TAGGED PER THE FOLLOWING SCHEDULE; KEY-PHASE: COLOR OF SIGNAL LOAD CONDUCTOR, "CODE" (ON TAG AT EACH END OF CONDUCTOR)

1. WESTBOUND (78TH AVE)	RED/WHITE	"X-WB"
2. WESTBOUND (PROTECTED/PERMISSIVE LEFT TURN)	RED	"X-WB"
3. EASTBOUND (78TH AVE)	ORANGE/WHITE	"X-EB"
4. NORTHBOUND (GUN CLUB ROAD)	BLUE/WHITE	"X-NB"

X= PHASE NUMBER

26. CONTRACTOR SHALL BE REQUIRED TO INSTALL WIRING AND TELEMETRY ANTENNAE AT LOCATIONS SHOWN AND SHALL FIELD VERIFY LOCATION OF TELEMETRY ANTENNAE PRIOR TO INSTALLATION TO ENSURE DIRECT COMMUNICATION IS ACHIEVED. FURTHERMORE, THE MASTER RADIO SHALL BE INSTALLED AT DIA ELECTRICAL SHOP LOCATED AT 7157 ROBERTSDALE STREET, DENVER CO. 80249. TELEMETRY (FIELD) AT THIS LOCATION WILL BE PAID FOR UNDER FORCE ACCOUNT.

27. TELEMETRY (FIELD) SHALL BE AN **ENCOM BB58-58 DUAL RADIO AND ENCOM BB58 SINGLE RADIO** . THE MCCAIN 333SD-ITS CABINET SHALL HAVE A **KUSA KY-CSV3170EM ETHERNET CARD RACK SWITCH AND MCCAIN 170 INTERNAL ETHERNET COMMUNICATIONS MODULE** INSTALLED. THE ANTENNA, CABLES, MOUNTING, INSTALLATION, ETHERNET CARD RACK SWITCH, INTERNAL ETHERNET COMMUNICATIONS MODULE OR ANY OTHER WORK AND MATERIALS NECESSARY TO MAKE THE SYSTEM FULLY OPERATIONAL SHALL BE INCLUDED IN PAY ITEM TELEMETRY (FIELD). REFER TO TELEMETRY RADIO PATH PLAN SHEET FOR LOCATIONS OF INSTALLATION.

28. EXISTING SIGNAL POLE CAISSONS SHALL BE REMOVED TO A MINIMUM OF TWO FEET BELOW EXISTING GRADE. COST OF WORK SHALL BE INCLUDED IN REMOVAL OF SIGNAL POLE PAY ITEM.

29. PULL BOX LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION. ALL PULL BOXES SHALL BE FLUSH WITH THE FINISHED GROUND SURFACE AND NOT SPACED ANY FARTHER THAN 150' APART. PULL BOXES WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.

30. UPON COMPLETION OF WORK, CONTRACTOR SHALL SUPPLY TWO (2) SETS OF RECORD DRAWINGS, CORRECTED PLANS AND ANY OTHER ADDITIONAL DATA REQUIRED BY THE ENGINEER.

31. THE CONTRACTOR SHALL PROVIDE DIA WITH AT LEAST FOUR (4) SETS OF EQUIPMENT SPECIFICATIONS/DESCRIPTIONS AND OBTAIN APPROVALS PRIOR TO ORDERING THE EQUIPMENT.

32. TRAFFIC SIGNAL PULL BOXES SHALL NOT BE LOCATED IN HANDICAP RAMPS, PAVEMENT AREAS, OR SIDEWALKS OR IN LOCATIONS WHERE THEY COULD POSSIBLY BE CONSTRUCTED IN THE FUTURE. ALL PULL BOXES SHALL BE FLUSH WITH THE FINISHED GROUND SURFACE.

33. CONTRACTOR SHALL COORDINATE A PRE-SURVEY CONFERENCE, WITH CCD LANDSIDE ENGINEERING AND CCD SURVEY, IMMEDIATELY FOLLOWING NOTICE TO PROCEED. CONTRACTOR SHALL PROVIDE A MINIMUM OF 10 COPIES OF THE CDOT PRE SURVEY CONFERENCE AGENDA LOCATED ON THE COLORADO DEPARTMENT OF TRANSPORTATION'S WEBSITE. THE PRE-SURVEY CONFERENCE WILL ADDRESS AT A MINIMUM THE VERTICAL DATUM, HORIZONTAL CONTROL, AND METHODOLOGY OF WORK TO BE USED BY THE CONTRACTOR'S SURVEYOR, WHICH WILL BE MONITORED AND CHECKED BY DIA/CCD SURVEY FOR ACCURACY. REFER TO DIA TECHNICAL SPECIFICATIONS; DIVISION I SECTION 1050 FOR FURTHER REQUIREMENTS.

34. TRAFFIC SIGNAL LIGHT POLES, MAST ARMS, AND PEDESTAL POLES SPECIFIED IN THESE PLANS SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM STANDARDS.

35. TRAFFIC SIGNAL POLES AND MAST ARMS SHALL BE ERECTED DURING NIGHT TIME HOURS FROM 9:00 P.M. TO 5:00 A.M.WITH AN APPROVED SHUTDOWN REQUEST AND DETOUR PLAN. SHUTDOWN REQUEST AND DETOUR MHT SHALL BE SUBMITTED VIA EMAIL TO LANDSIDE ENGINEERING FOR APPROVAL A MINIMUM OF 5 DAYS PRIOR TO WORK. ADDITIONALLY, CONTRACTOR SHALL COORDINATE A PRE-ERECTION CONFERENCE 10 DAYS PRIOR TO WORK WITH LANDSIDE ENGINEERING.

36. FIRE PREEMPTION UNIT AND TIMER SHALL BE THE **OPTICOM INFRARED SYSTEM**. FIRE PREEMTION UNIT AND TIMER SHALL BE MEASURED AS ONE EACH PER INTERSECTION LOCATION AND SHALL INCLUDE THE CABLE, CONNECTIONS, MOUNTING HARDWARE, INSTALLATION AND ALL OTHER MATERIAL OR WORK NECESSARY TO COMPLETE THIS ITEM. DETECTION SYSTEM AND PHASE SELECTOR MODEL NUMBERS TO BE INCORPORATED INTO THIS PROJECT SHALL BE AS FOLLOWS:

- AIRSIDE EMPLOYEE PARKING LOT AND 78TH AVE.
EAST/WEST BI-DIRECTIONAL - OPTICOM INFRARED SYSTEM; MODEL 722 DETECTOR W/ MODEL 138 DETECTOR CABLE
SIGNAL CONTROLLER - OPTICOM INFRARED SYSTEM; MODEL 762 PHASE SELECTOR

- LANDSIDE EMPLOYEE PARKING LOT AND 78TH AVE.
EAST/WEST BI-DIRECTIONAL - OPTICOM INFRARED SYSTEM; MODEL 722 DETECTOR W/ MODEL 138 DETECTOR CABLE
SIGNAL CONTROLLER - OPTICOM INFRARED SYSTEM; MODEL 762 PHASE SELECTOR

- JACKSON GAP AND 78TH AVE.
EAST/WEST BI-DIRECTIONAL - OPTICOM INFRARED SYSTEM; MODEL 722 DETECTOR W/ MODEL 138 DETECTOR CABLE
NORTHBOUND - OPTICOM INFRARED SYSTEM; MODEL 721 DETECTOR W/ MODEL 138 DETECTOR CABLE
SIGNAL CONTROLLER - OPTICOM INFRARED SYSTEM; MODEL 762 PHASE SELECTOR

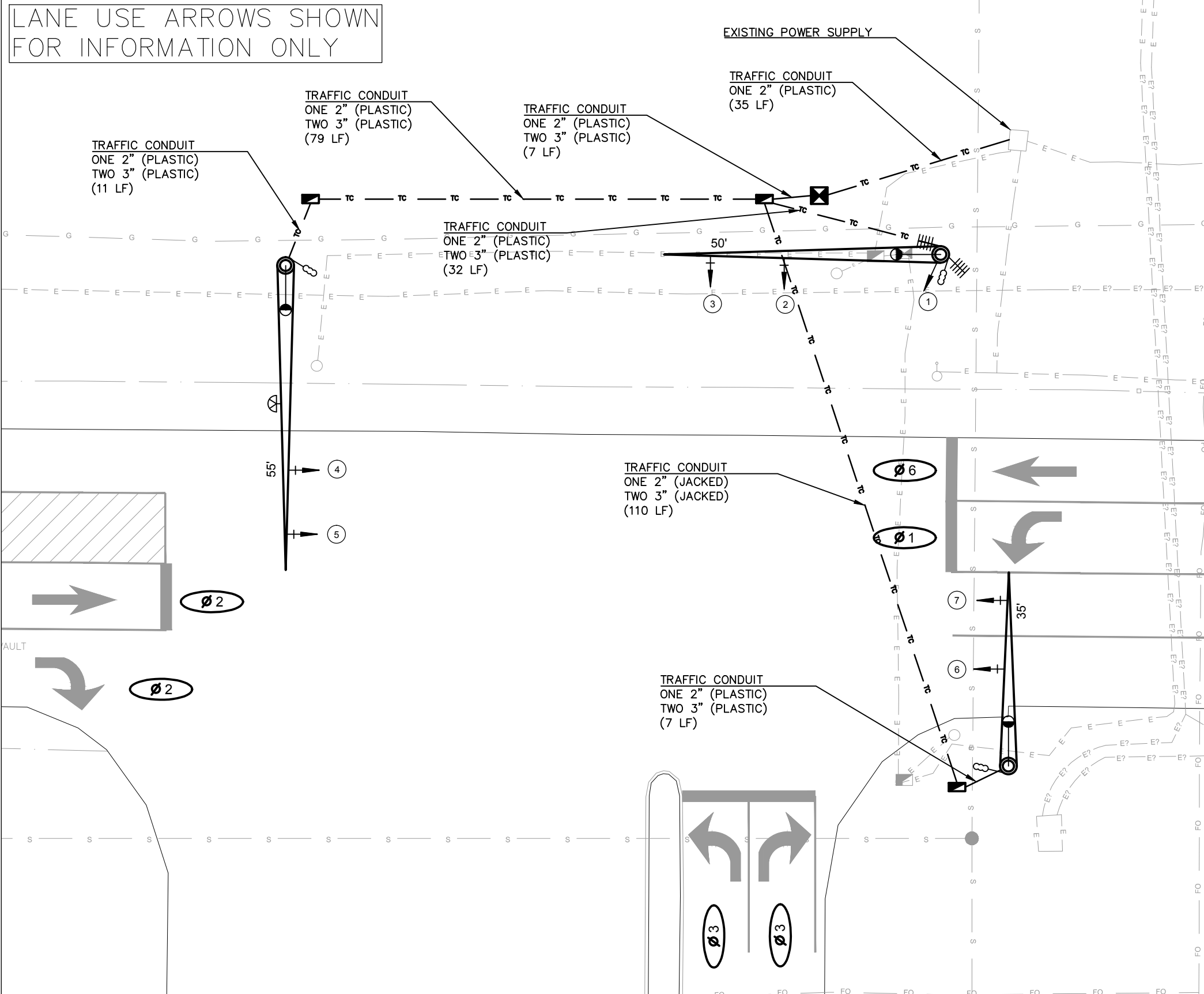
- GUN CLUB ROAD AND 78TH AVE.
EAST/WEST BI-DIRECTIONAL - OPTICOM INFRARED SYSTEM; MODEL 722 DETECTOR W/ MODEL 138 DETECTOR CABLE
NORTHBOUND - OPTICOM INFRARED SYSTEM; MODEL 721 DETECTOR W/ MODEL 138 DETECTOR CABLE
SIGNAL CONTROLLER - OPTICOM INFRARED SYSTEM; MODEL 762 PHASE SELECTOR

37. THE OPTICOM INFRARED SYSTEM **MODEL 794H LED EMITTERS** WILL BE PAID ONE EACH TO FURNISH ONLY ON THIS PROJECT. CONTRACTOR SHALL VERIFY QUANTITY WITH DIA ENGINEER PRIOR TO ORDERING AND SHALL BE DELIVERED TO THE LANDSIDE ENGINEERING OFFICE UPON RECEIPT. THE FIRE PREEMPTION SYSTEM SHALL BE TESTED WITH FIRE AND RESCUE TO ENSURE IT IS FULLY OPERATIONAL PRIOR TO FINAL ACCEPTANCE.












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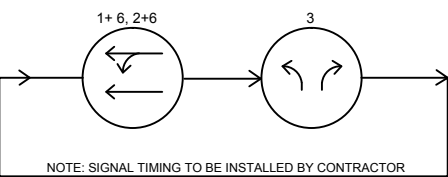
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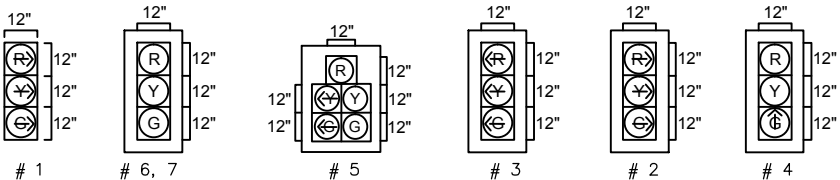
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| PROPOSED SIGNAL POLE AND MAST ARM |  |
| PROPOSED SIGNAL CONTROLLER CABINET |  |
| FIRE PREEMPTION UNIT AND TIMER |  |
| LUMINAIRE (LED) (120 W) |  |
| TELEMETRY ANTENNA |  |
| TRAFFIC SIGNAL HEAD WITHOUT BACKPLATE |  |
| TRAFFIC SIGNAL HEAD WITH BACKPLATE |  |
| MICROWAVE VEHICLE RADAR DETECTOR |  |
| TRAFFIC CONDUIT |  |
| EXISTING PULL BOX |  |
| EXISTING SIGNAL CONTROLLER CABINET |  |

SIGNAL PHASING



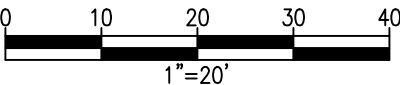
SIGNAL HEADS

12" LED LENSES
5" (NOMINAL BACKPLATES)
ALUMINUM LOUVERED



TABULATION OF TRAFFIC ENGINEERING ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
203-01597	POTHOLING	HR	20	
613-00201	2 INCH ELECTRICAL CONDUIT (JACKED)	LF	110	
613-00301	3 INCH ELECTRICAL CONDUIT (JACKED)	LF	220	
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	171	
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	272	
613-10000	WIRING	LS	0.25	
613-13000	LUMINAIRE (LED) (120 watt)	EA	3	
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	6	
614-70560	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA	1	
614-72866	FIRE PREEMPTION UNIT AND TIMER	EA	1	
614-72887	MICROWAVE VEHICLE RADAR DETECTOR	EA	3	
614-86105	TELEMETRY (Field)	EA	2	
614-86246	CONTROLLER (TYPE 170E-HC11)	EA	1	
614-86800	UNINTERRUPTED POWER SUPPLY	EA	1	
700-70082	F/A FURNISH & INSTALL ELECTRICAL SUPPLY	F/A	1	



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Revised:

Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT AIRSIDE LOT SIGNAL / UTILITY PLAN

Designer:

GMF

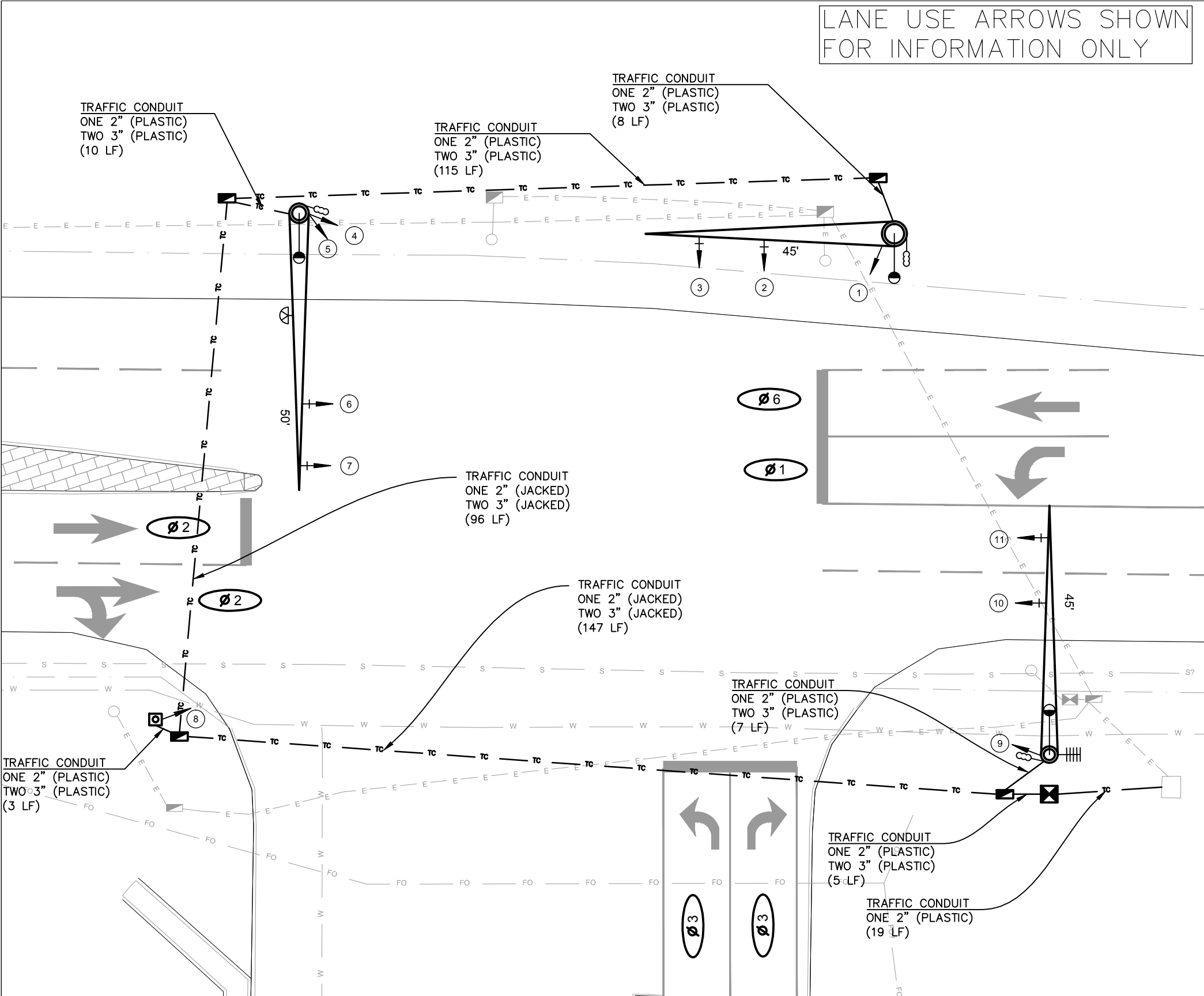
Structure Numbers

Sheet Subset: ROADWAY

Subset Sheets: 1 of 6

Const. Contract No.

Sheet Number 23



LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- FIRE PREEMPTION UNIT AND TIMER
- LUMINAIRE (LED) (120 W)
- TELEMETRY ANTENNA
- TRAFFIC SIGNAL HEAD WITHOUT BACKPLATE
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- MICROWAVE VEHICLE RADAR DETECTOR
- TRAFFIC CONDUIT
- EXISTING PULL BOX
- EXISTING SIGNAL CONTROLLER CABINET

SIGNAL PHASING

SIGNAL HEADS

12" LED LENSES
5" (NOMINAL BACKPLATES)
ALUMINUM LOUVERED

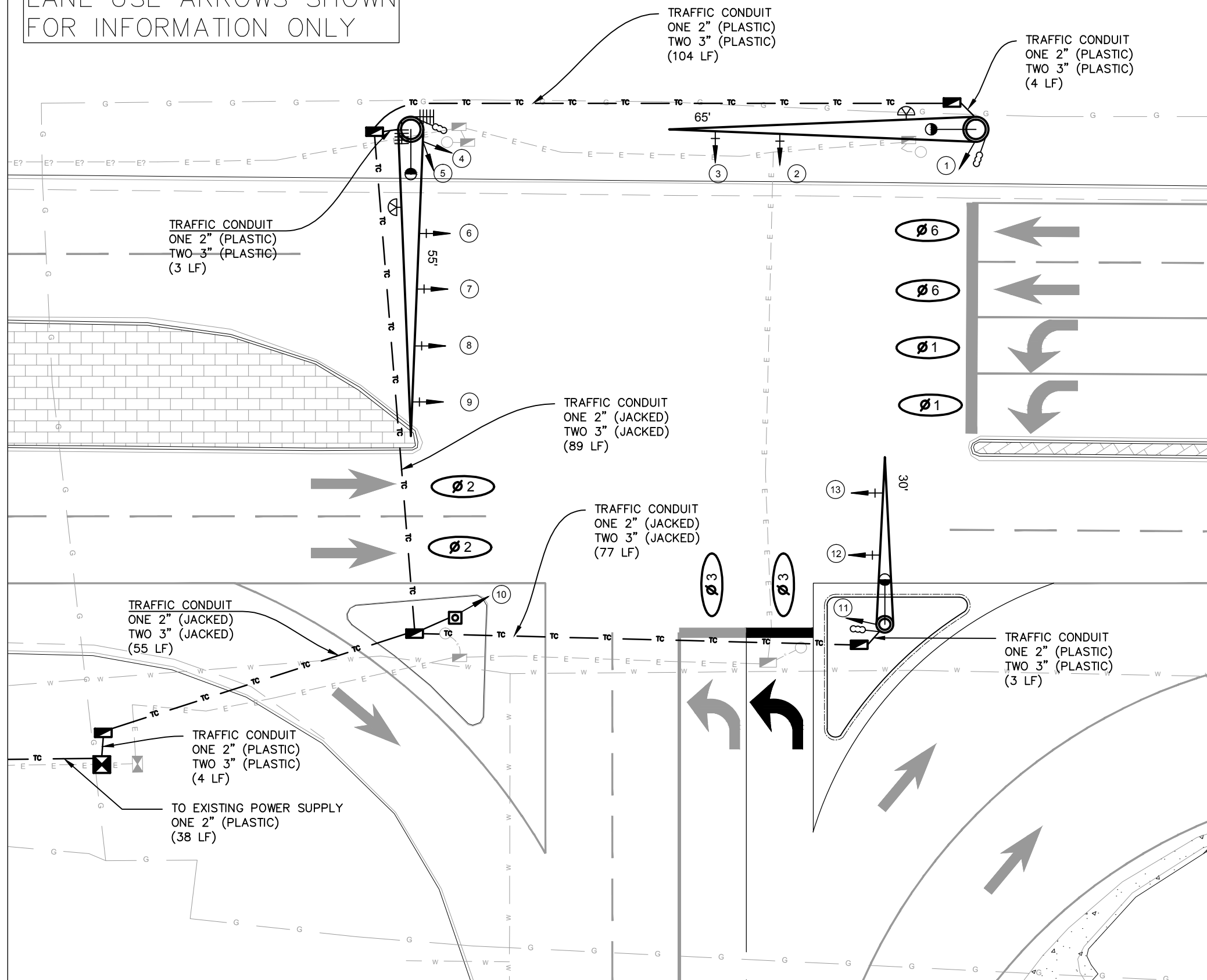
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TABULATION OF TRAFFIC ENGINEERING ITEMS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
203-01597	POTHOLING	HR	20	
613-00201	2 INCH ELECTRICAL CONDUIT (JACKED)	LF	243	
613-00301	3 INCH ELECTRICAL CONDUIT (JACKED)	LF	486	
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	167	
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	296	
613-10000	WIRING	LS	0.25	
613-13000	LUMINAIRE (LED) (120 watt)	EA	3	
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	10	
614-70560	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA	1	
614-72866	FIRE PREEMPTION UNIT AND TIMER	EA	1	
614-72887	MICROWAVE VEHICLE RADAR DETECTOR	EA	3	
614-86105	TELEMETRY (Field)	EA	1	
614-86246	CONTROLLER (TYPE 170E-HC11)	EA	1	
614-86800	UNINTERRUPTED POWER SUPPLY	EA	1	
700-70082	F/A FURNISH & INSTALL ELECTRICAL SUPPLY	F/A	1	












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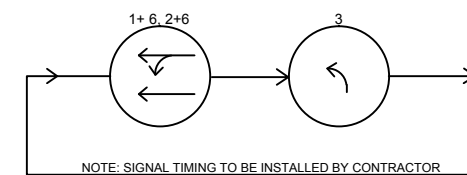
LANE USE ARROWS SHOWN
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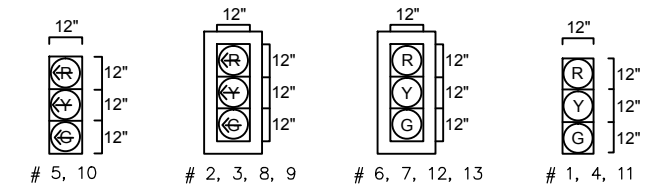
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| PROPOSED SIGNAL POLE AND MAST ARM |  |
| PROPOSED SIGNAL CONTROLLER CABINET |  |
| FIRE PREEMPTION UNIT AND TIMER |  |
| LUMINAIRE (LED) (120 W) |  |
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| TRAFFIC CONDUIT |  |
| EXISTING PULL BOX |  |
| EXISTING SIGNAL BOX CONTROLLER CABINET |  |

SIGNAL PHASING



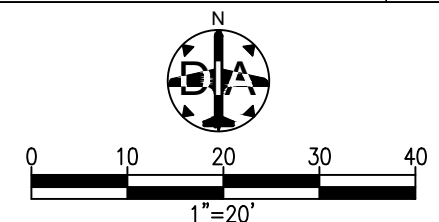
SIGNAL HEADS

12" LED LENSES
5" (NOMINAL BACKPLATES)
ALUMINUM LOUVERED



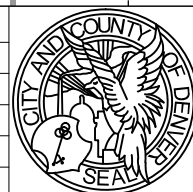
TABULATION OF TRAFFIC ENGINEERING ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
203-01597	POTHOLING	HR	20	
613-00201	2 INCH ELECTRICAL CONDUIT (JACKED)	LF	221	
613-00301	3 INCH ELECTRICAL CONDUIT (JACKED)	LF	442	
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	163	
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	248	
613-10000	WIRING	LS	0.25	
613-13000	LUMINAIRE (LED) (120 watt)	EA	3	
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	13	
614-72866	FIRE PREEMPTION UNIT AND TIMER	EA	2	
614-72887	MICROWAVE VEHICLE RADAR DETECTOR	EA	3	
614-86105	TELEMETRY (Field)	EA	2	
614-86246	CONTROLLER (TYPE 170E-HC11)	EA	1	
614-86800	UNINTERRUPTED POWER SUPPLY	EA	1	
700-70082	F/A FURNISH & INSTALL ELECTRICAL SUPPLY	F/A	1	



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	78TH AVE TRAFFIC SIGNAL REPLACEMENT JACKSON GAP SIGNAL / UTILITY PLAN
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Designer:

GMF

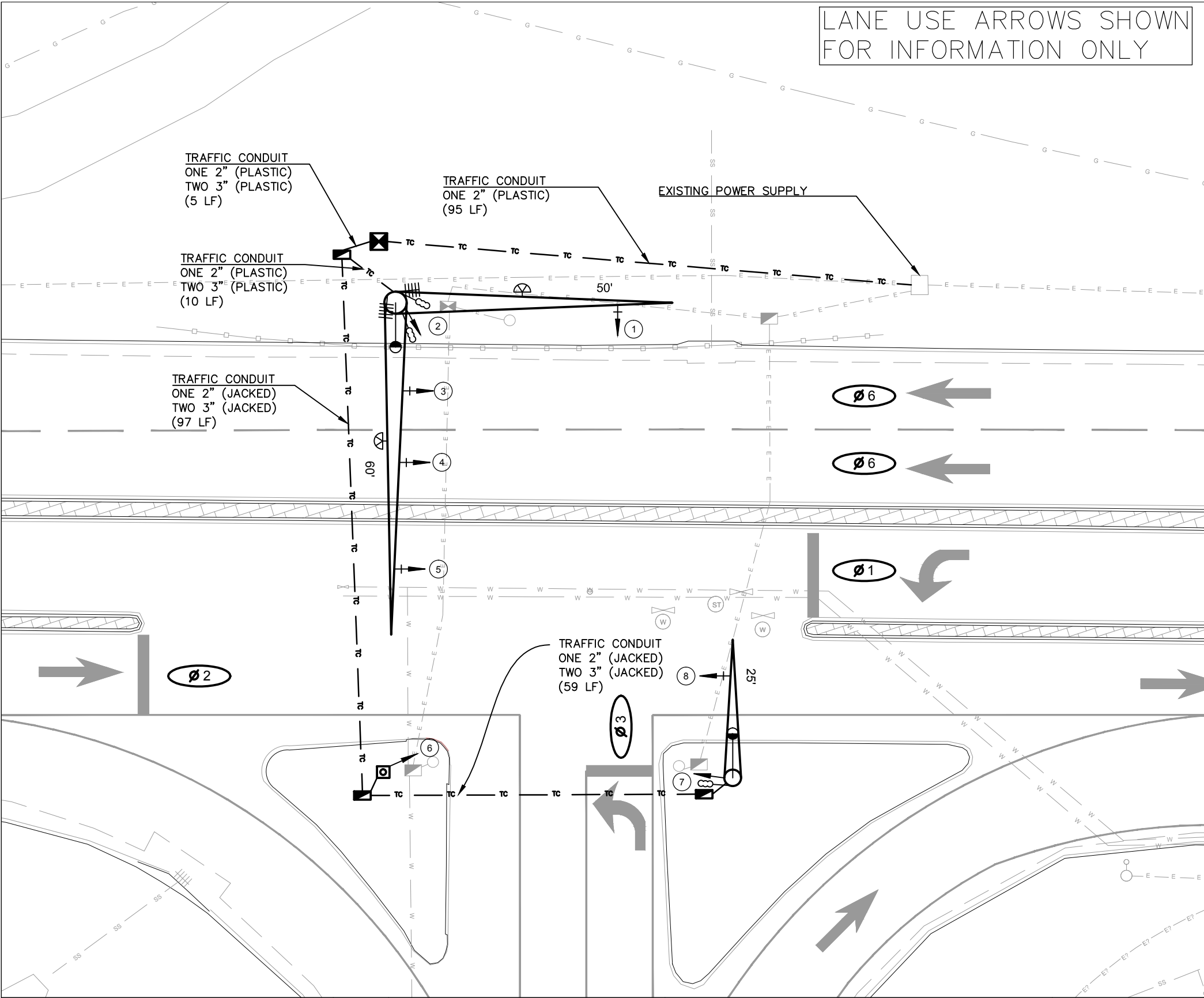
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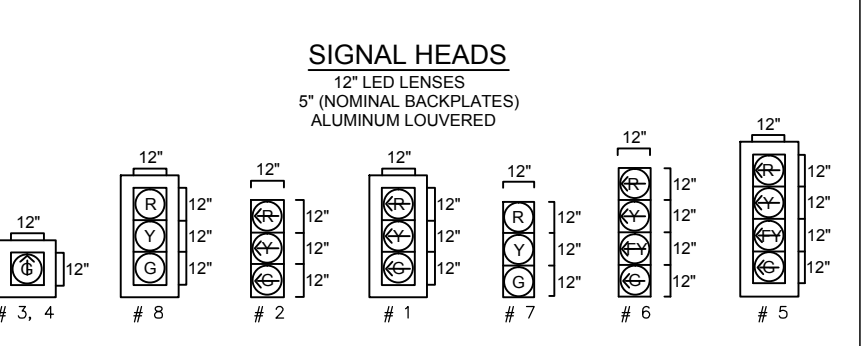
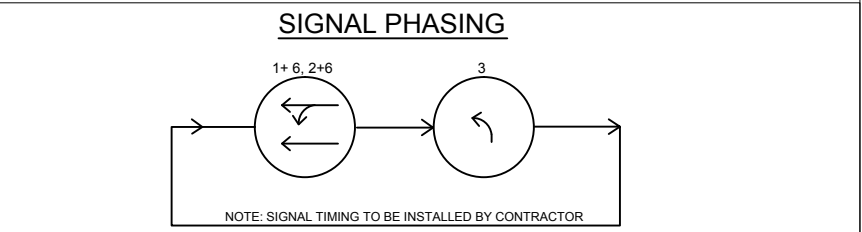
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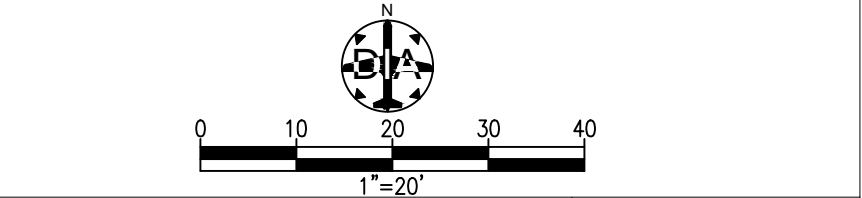


LEGEND

- PROPOSED SIGNAL POLE AND MAST ARM
- PROPOSED SIGNAL CONTROLLER CABINET
- FIRE PREEMPTION UNIT AND TIMER
- LUMINAIRE (LED) (120 W)
- TELEMETRY ANTENNA
- TRAFFIC SIGNAL HEAD WITHOUT BACKPLATE
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- MICROWAVE VEHICLE RADAR DETECTOR
- TRAFFIC CONDUIT
- EXISTING PULL BOX
- EXISTING SIGNAL CONTROLLER CABINET



TABULATION OF TRAFFIC ENGINEERING ITEMS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
203-01597	POTHOLING	HR	20	
613-00201	2 INCH ELECTRICAL CONDUIT (JACKED)	LF	156	
613-00301	3 INCH ELECTRICAL CONDUIT (JACKED)	LF	312	
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	120	
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	50	
613-10000	WIRING	LS	0.25	
613-13000	LUMINAIRE (LED) (120 watt)	EA	2	
614-70112	TRAFFIC SIGNAL FACE (12)	EA	2	
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	4	
614-70448	TRAFFIC SIGNAL FACE (12-12-12-12)	EA	2	
614-72866	FIRE PREEMPTION UNIT AND TIMER	EA	2	
614-72887	MICROWAVE VEHICLE RADAR DETECTOR	EA	3	
614-86105	TELEMETRY (Field)	EA	2	
614-86246	CONTROLLER (TYPE 170E-HC11)	EA	1	
614-86800	UNINTERRUPTED POWER SUPPLY	EA	1	
700-70082	F/A FURNISH & INSTALL ELECTRICAL SUPPLY	F/A	1	



Print Date: 2/1/2013		Sheet Revisions			DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENA BOULEVARD DENVER, CO 80249-6340	As Constructed	78TH AVE TRAFFIC SIGNAL REPLACEMENT		Const. Contract No.
File Name: 26 - 2013XXXXXSGPL04.dwg		Date:	Comments	Init.			GUN CLUB SIGNAL / UTILITY PLAN		
Horiz. Scale: N/A Vert. Scale: N/A							Designer: GMF	Structure Numbers	
Unit Leader: MHS							Detailer: MWC		
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory							Sheet Subset: ROADWAY	Subset Sheets: 4 of 6	
								Sheet Number 26	



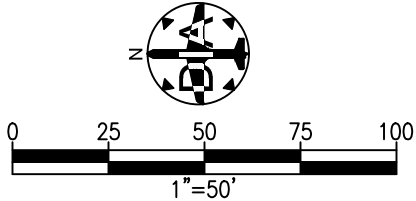
LEGEND

EXISTING SIGNAL POLE AND MAST ARM	
PROPOSED SIGNAL CONTROLLER CABINET	
TELEMETRY ANTENNA	
EXISTING ELECTRICAL	
EXISTING SIGNAL CONTROLLER CABINET	
12" LED (Ball) (Red)	
12" LED (Ball) (Yellow)	
12" LED (Ball) (Green)	
12" LED (Arrow) (Green)	
12" LED (Arrow) (Yellow)	
12" LED (Arrow) (Red)	

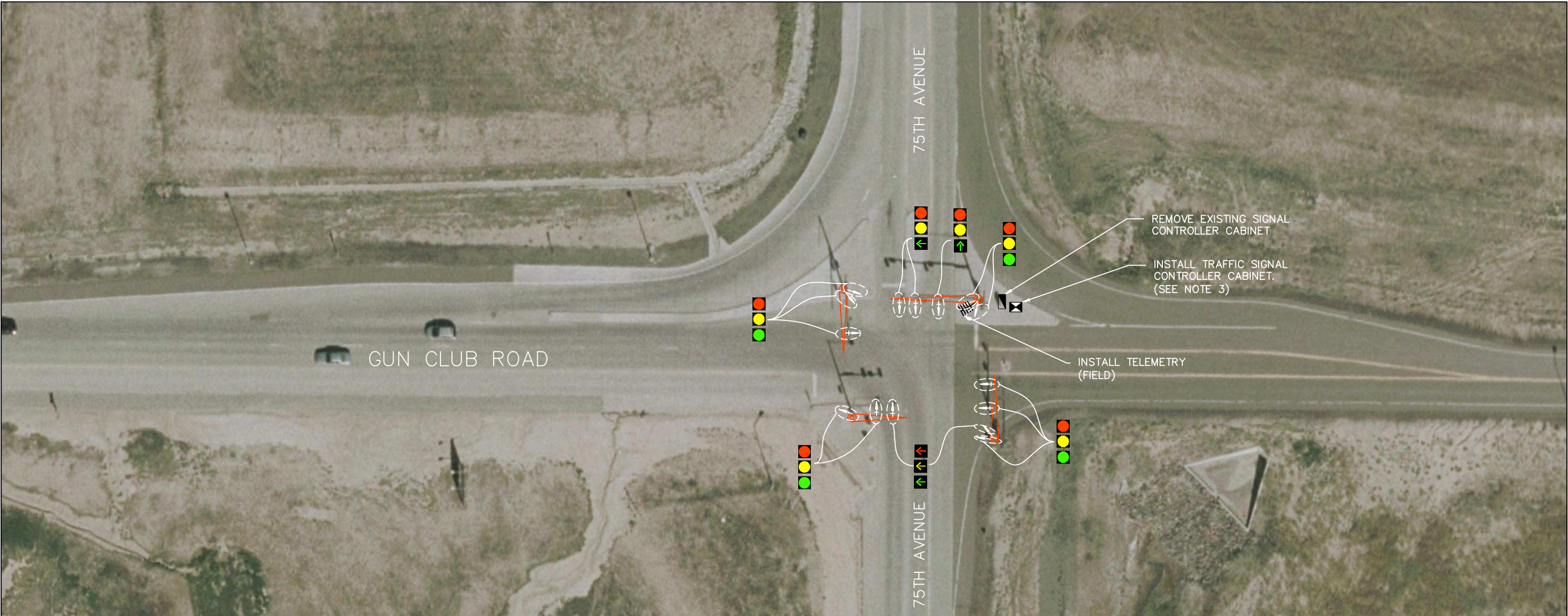
NOTES:

- 1.) CONTRACTOR SHALL REPLACE EXISTING SIGNAL LAMPS WITH WITH 12-INCH LED OPTICAL UNITS AS SHOWN.
- 2.) THE TRAFFIC CONTROLLER SPECIFIED SHALL BE A 170E-HC11 WITH WAPITI W4IKS SOFTWARE (SOFTWARE INCLUDED IN THE COST OF THE CONTROLLER). THE CABINET SHALL BE A MCCAIN 333SD-ITS WITH CLARY SP-1250LX UPS. THE MCCAIN 333SD-ITS SHALL BE INCLUDED IN THE COST OF THE CONTROLLER.
- 3.) CONTRACTOR SHALL REMOVE EXISTING CABINETS AS SHOWN. THE EXISTING ELECTRICAL IS APPROXIMATE AND SHALL BE LOCATED AND POTHOLED PRIOR TO DISTURBANCE SO THAT PLACEMENT OF THE NEW CONTROLLER CABINETS WILL INTERCEPT THE ELECTRICAL CONDUIT. NEW CONTROLLER CABINET LOCATIONS SHALL BE STAKED AND APPROVED BY THE DIA ENGINEER PRIOR TO PLACEMENT.
- 4.) TELEMETRY (FIELD) SHOWN SHALL BE AN ENCOM BB58 RADIO. ANTENNA, CABLES, MOUNTING & INSTALLATION SHALL BE INCLUDED IN PAY ITEM TELEMETRY (FIELD).

TABULATION OF TRAFFIC ENGINEERING ITEMS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
203-01597	Potholing	HR	10	
614-10151	12 Inch LED (Ball) (Green)	EA	17	
614-10152	12 Inch LED (Ball) (Red)	EA	17	
614-10153	12 Inch LED (Ball) (Yellow)	EA	17	
614-10156	12 Inch LED (Arrow) (Green)	EA	5	
614-10157	12 Inch LED (Arrow) (Red)	EA	1	
614-10158	12 Inch LED (Arrow) (Yellow)	EA	4	
614-86105	Telemetry (Field)	EA	2	
614-86800	Uninterrupted Power Supply	EA	1	
614-86246	Controller (TYPE 170E-HC11)	EA	2	



Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div></div><div></div><div></div></div><div>DENVER INTERNATIONAL AIRPORT</div><div>PLANNING & DEVELOPMENT</div><div>AIRPORT OFFICE BUILDING, 7th FLOOR</div><div>8500 PENA BOULEVARD</div><div>DENVER, CO 80249-6340</div></div>	As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 26A - 2013XXXXXSGPL05.dwg		Date:	Comments	Init.		No Revisions:		JACKSON GAP SIGNAL PLAN				
Horiz. Scale: N/A Vert. Scale: N/A						Revised:		Designer: GMF	Structure Numbers			
Unit Leader: MHS						Void:		Detailer: MWC				
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory								Sheet Subset: ROADWAY	Subset Sheets: 5 of 6	Sheet Number 27		



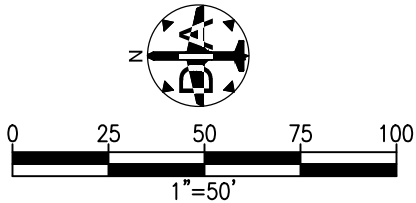
LEGEND

EXISTING SIGNAL POLE AND MAST ARM	
PROPOSED SIGNAL CONTROLLER CABINET	
TELEMETRY ANTENNA	
EXISTING ELECTRICAL	
EXISTING SIGNAL CONTROLLER CABINET	
12" LED (Ball) (Red)	
12" LED (Ball) (Yellow)	
12" LED (Ball) (Green)	
12" LED (Arrow) (Green)	
12" LED (Arrow) (Yellow)	
12" LED (Arrow) (Red)	

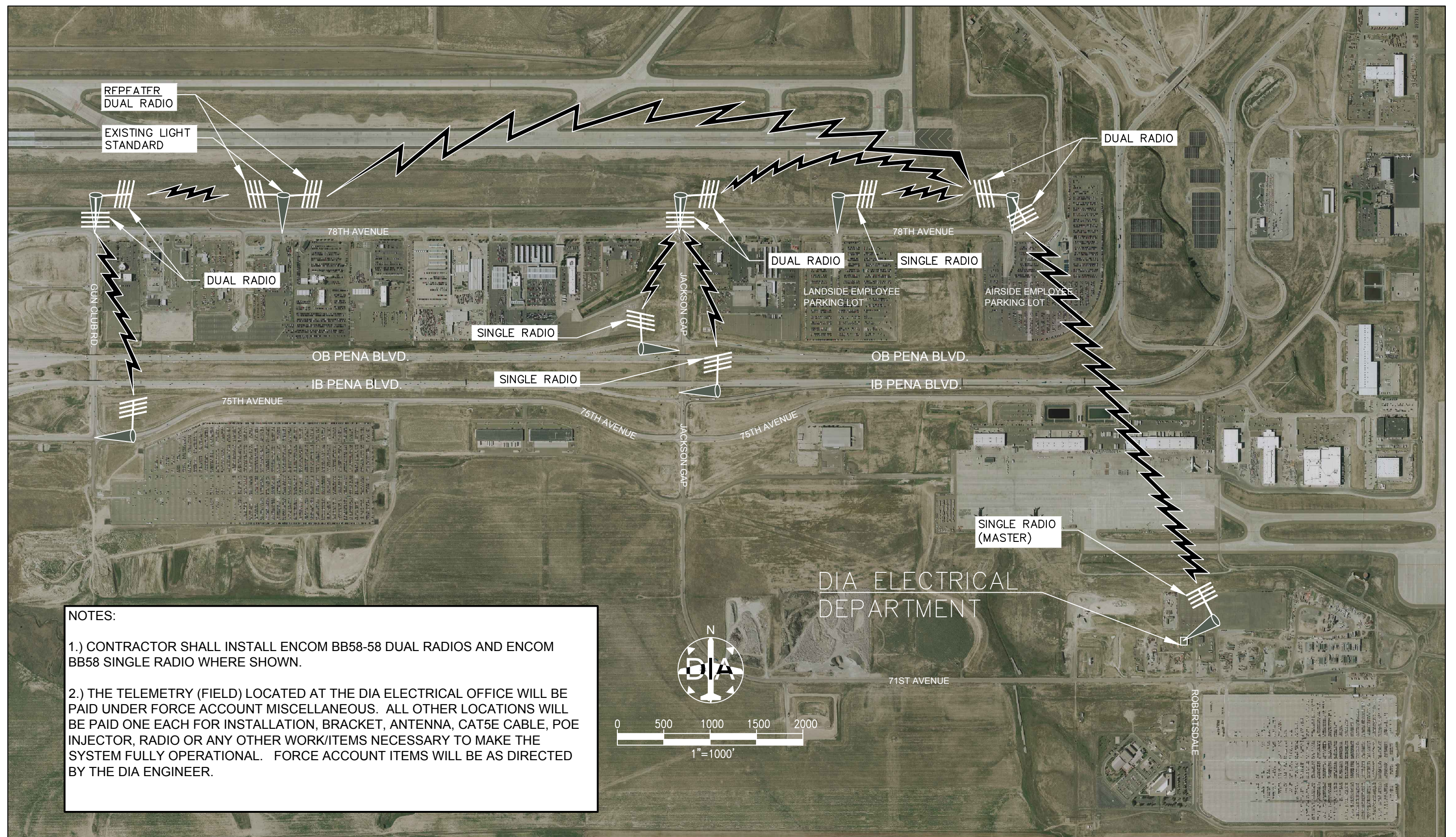
NOTES:


- 1.) CONTRACTOR SHALL REPLACE EXISTING SIGNAL LAMPS WITH WITH 12-INCH LED OPTICAL UNITS AS SHOWN.
- 2.) THE TRAFFIC CONTROLLER SPECIFIED SHALL BE A 170E-HC11 WITH WAPITI W4IKS SOFTWARE (SOFTWARE INCLUDED IN THE COST OF THE CONTROLLER). THE CABINET SHALL BE A MCCAIN 333SD-ITS WITH CLARY SP-1250LX UPS. THE MCCAIN 333SD-ITS SHALL BE INCLUDED IN THE COST OF THE CONTROLLER.
- 3.) CONTRACTOR SHALL REMOVE EXISTING CABINETS AS SHOWN. THE 170E CABINET AND TELEMETRY (FIELD) SHOWN IS AN APPROXIMATE LOCATION. CONTRACTOR SHALL CONDUCT SITE VISIT WITH DIA ENGINEER TO DETERMINE ITS EXACT LOCATION FOR INSTALLATION.
- 4.) TELEMETRY FIELD SHALL BE AN ENCOM BB58 RADIO. ANTENNA, CABLES, MOUNTING & INSTALLATION SHALL BE INCLUDED IN PAY ITEM TELEMETRY (FIELD).

TABULATION OF TRAFFIC ENGINEERING ITEMS				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
614-10151	12 Inch LED (Ball) (Green)	EA	10	
614-10152	12 Inch LED (Ball) (Red)	EA	13	
614-10153	12 Inch LED (Ball) (Yellow)	EA	13	
614-10156	12 Inch LED (Arrow) (Green)	EA	5	
614-10157	12 Inch LED (Arrow) (Red)	EA	2	
614-10158	12 Inch LED (Arrow) (Yellow)	EA	2	
614-86105	Telemetry (Field)	EA	1	
614-86800	Uninterrupted Power Supply	EA	1	
614-86246	Controller (TYPE 170E-HC11)	EA	1	



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File Name: 26B - 2013XXXXXSGPL06.dwg		Date:	Comments	Init.		No Revisions:			GUN CLUB & 75TH AVE. SIGNAL PLAN			
Horiz. Scale: N/A Vert. Scale: N/A						Revised:	Designer: GMF	Structure Numbers				
Unit Leader: MHS						Void:	Detailer: MWC					
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory							Sheet Subset: ROADWAY	Subset Sheets: 6 of 6			Sheet Number	28



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File Name: 26C - 2013XXXXXSGPL07.dwg		Date:	Comments	Init.		No Revisions:		TELEMETRY RADIO PATH				
Horiz. Scale: N/A Vert. Scale: N/A						Revised:		Designer: GMF	Structure			
Unit Leader: MHS						Void:		Detailer: MWC	Numbers			
\\Diagis05\dia-projects\Landside\Projects\2013\78th Ave. Traffic Signal Replacements\02. CAD Drawings Directory								Sheet Subset: ROADWAY	Subset Sheets: 1 of 1		Sheet Number 29	

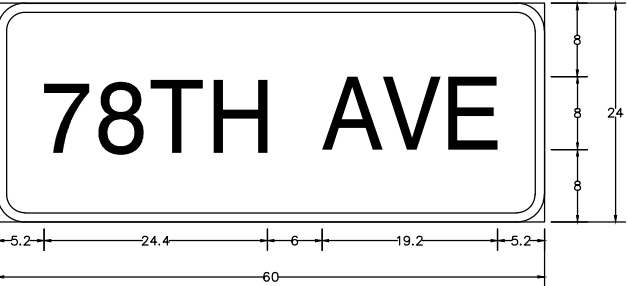
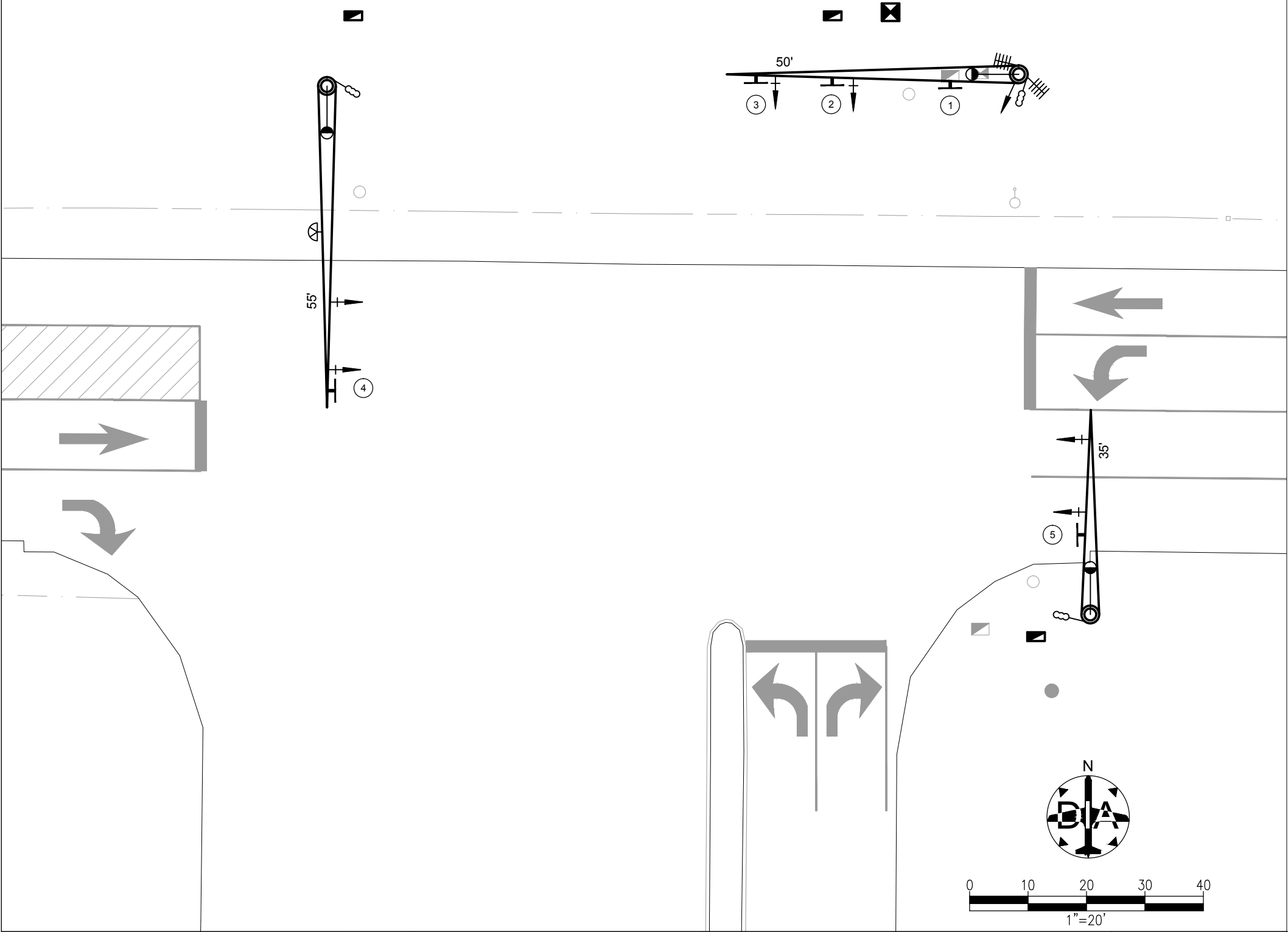
TABULATION OF PAVEMENT MARKINGS

LOCATION	STATION/ MP	DESCRIPTION	PREFORMED THERMO- PLASTIC (SF)	EPOXY PAVEMENT MARKINGS (LF)
JACKSON GAP/78TH	NB	2' X 12' STOP LINE (NB JACKSON GAP)	24	
JACKSON GAP/78TH	NB	8-INCH SOLID WHITE (ISLAND)		152
JACKSON GAP/78TH	NB	8-INCH WHITE DOTTED FOR TURN LANE		96
JACKSON GAP/78TH	NB	8-INCH SOLID WHITE NB CHANNELIZING LINE		100
TOTAL LF =				348
TOTAL SF =			24	232
TOTAL GALLONS @ 105 SF/GAL =				2.0

1. ALL SIGN PANEL REMOVALS BECOME THE PROPERTY OF DIA.
2. SIGNS ON MAST ARMS SHALL BE MOUNTED WITH SKY BRACKETS.

Print Date: 2/1/2013	<div><div></div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div></div><div></div><div></div></div><div>DENVER INTERNATIONAL AIRPORT</div><div>PLANNING & DEVELOPMENT</div><div>AIRPORT OFFICE BUILDING, 7th FLOOR</div><div>8500 PENA BOULEVARD</div><div>DENVER, CO 80249-6340</div></div>	As Constructed		78TH AVE TRAFFIC SIGNAL REPLACEMENT			Const. Contract No.	
File Name: 27- 2013XXXXXSIGNINGTB01.dwg		Date:	Comments	Init.		No Revisions:		TABULATION OF SIGNS/PAVEMENT MARKINGS				
Horiz. Scale: N/A												

LANE USE ARROWS SHOWN
FOR INFORMATION ONLY



3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
[78TH AVE] E;
TABLE OF LETTER AND OBJECT LEFTS

7	8	T	H	A	V	E
5.2	11.3	16.8	23.7	35.6	42.2	49.4

SIGN SPECIAL

①



30R3-5L

③ ④



30R3-5R

② ⑤

Print Date:	2/1/2013
File Name:	28- 2013XXXXXSIGNINGPL01.dwg
Horiz. Scale:	N/A
Unit Leader:	MHS
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Sheet Revisions		
Date:	Comments	Init.



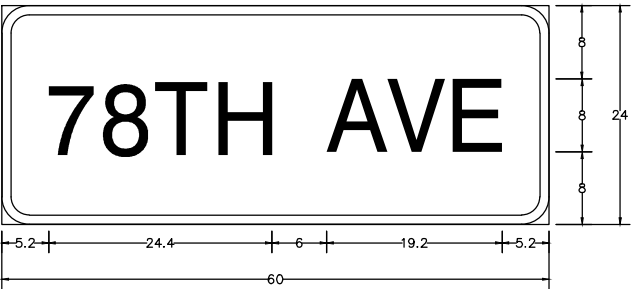
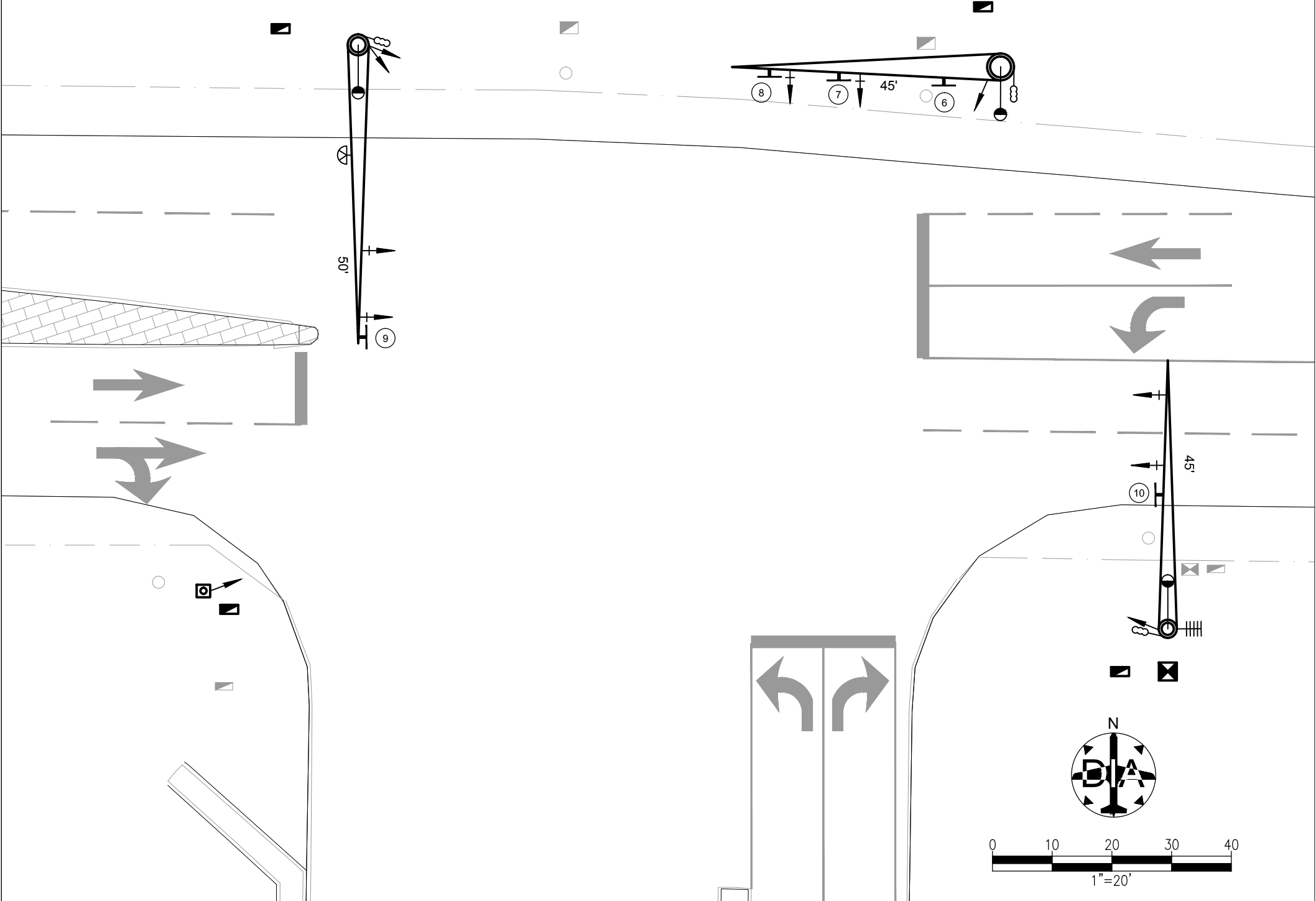
DENVER INTERNATIONAL AIRPORT
PLANNING & DEVELOPMENT
AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed
No Revisions:
Revised:
Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT AIRSIDE LOT SIGNING PLAN		
Designer:	GMF	Structure Numbers
Detailer:	MWC	
Sheet Subset:	ROADWAY	Subset Sheets: 1 of 4

Const. Contract No.
Sheet Number 31

LANE USE ARROWS SHOWN
FOR INFORMATION ONLY



3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
[78TH AVE] E;
TABLE OF LETTER AND OBJECT LEFTS

7	8	T	H	A	V	E
5.2	11.3	16.8	23.7	35.6	42.2	49.4

SIGN SPECIAL
6



30R3-5L
8 9



30R3-5R
7



30R3-6R
10

Print Date:	2/1/2013
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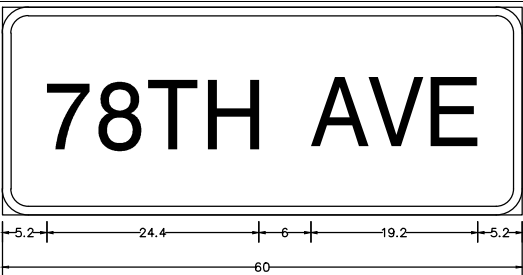
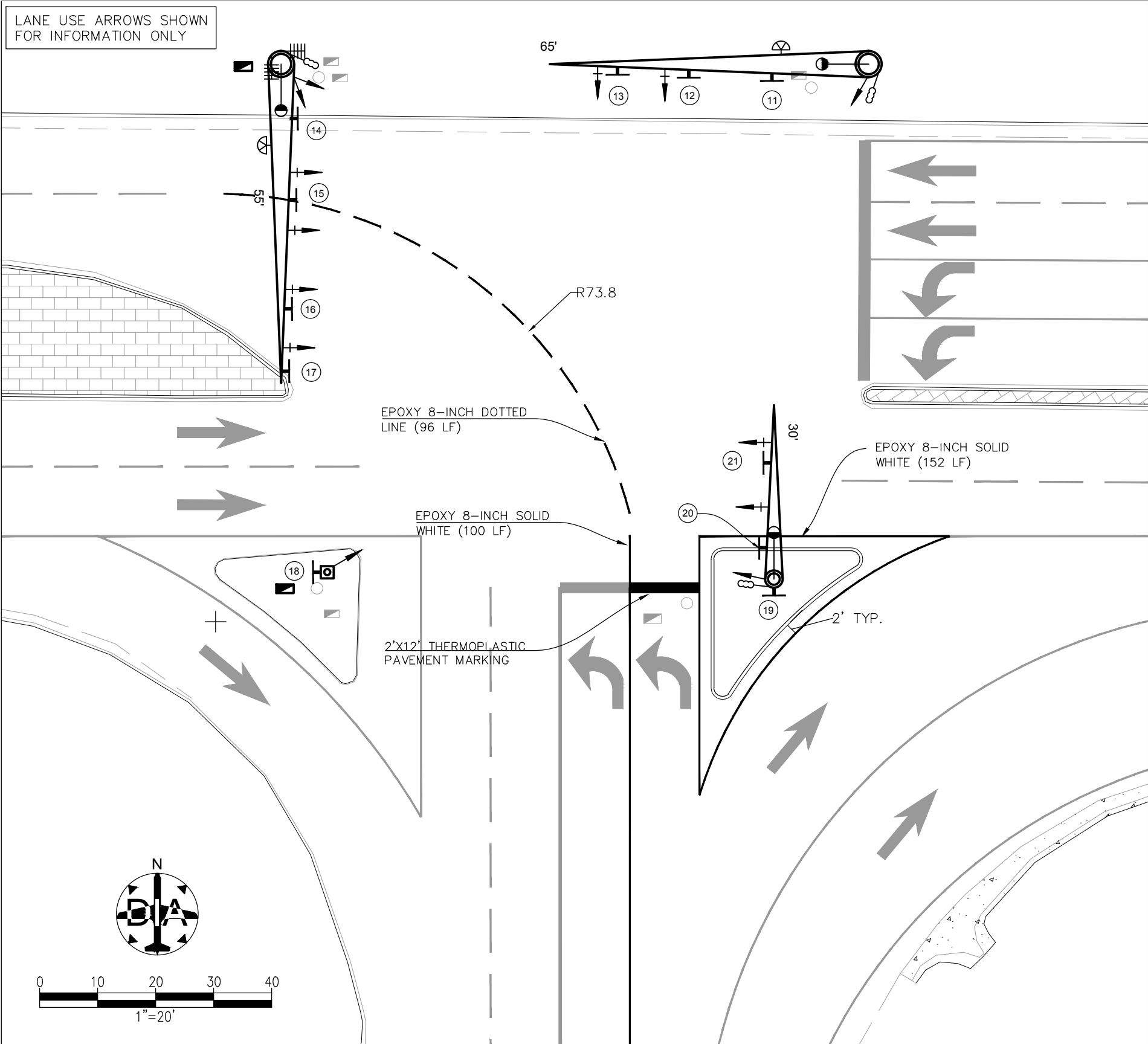


DENVER INTERNATIONAL AIRPORT
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8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed
No Revisions:
Revised:
Void:

78TH AVE TRAFFIC SIGNAL REPLACEMENT LANDSIDE LOT SIGNING PLAN			
Designer:	GMF	Structure	
Detailer:	MWC	Numbers	
Sheet Subset:	ROADWAY	Subset Sheets:	2 of 4

Const. Contract No.
Sheet Number
32



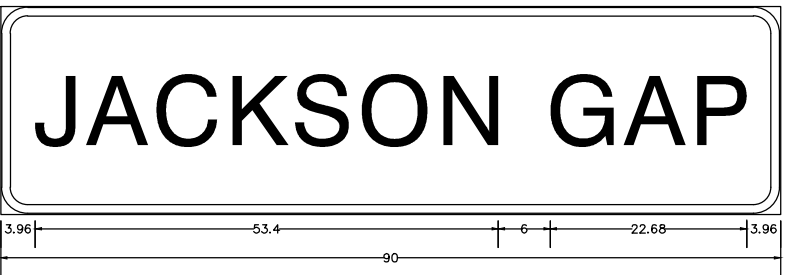
3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
[78TH AVE] E;
TABLE OF LETTER AND OBJECT LEFTS

7	8	T	H	A	V	E
5.2	11.3	16.8	23.7	35.6	42.2	49.4

SIGN SPECIAL
11



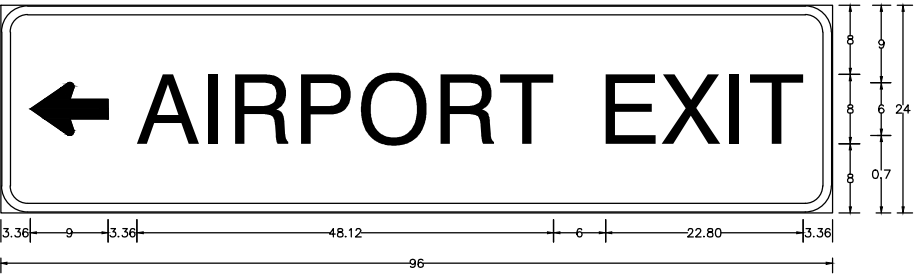
30R3-5L
12 13 16 17



3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
[JACKSON GAP] E;
TABLE OF LETTER AND OBJECT LEFTS

J	A	C	K	S	O	N	G	A	P
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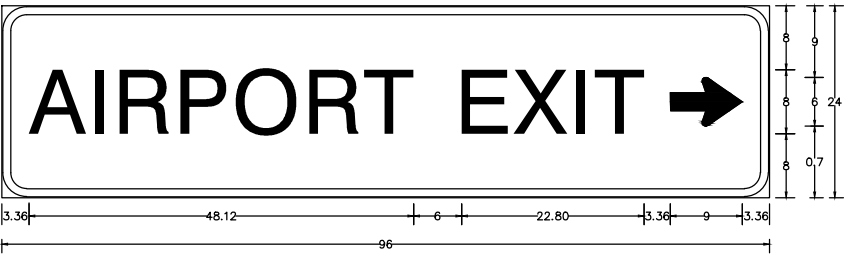
SIGN SPECIAL
14 20



3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
STANDARD ARROW CUSTOM 9.0" X 6.0" 180°
[AIRPORT EXIT] E;
TABLE OF LETTER AND OBJECT LEFTS

←	A	I	R	P	O	R	T	E	X	I	T
3.36	15.72	24.00	27.00	34.68	41.64	50.76	57.72	69.84	76.44	84.12	86.52

SIGN SPECIAL
15



3.0" RADIUS, 1" BORDER, WHITE ON GREEN;
[AIRPORT EXIT] E;
STANDARD ARROW CUSTOM 9.0" X 6.0" 0°
TABLE OF LETTER AND OBJECT LEFTS

A	I	R	P	O	R	T	E	X	I	T	→
3.36	11.64	14.76	22.32	29.28	38.52	45.36	57.48	63.96	71.88	74.16	83.64

SIGN SPECIAL
21

Print Date: 2/1/2013
File Name: 30- 2013XXXXXSIGNINGPL03.dwg
Horiz. Scale: N/A Vert. Scale: N/A
Unit Leader: MHS
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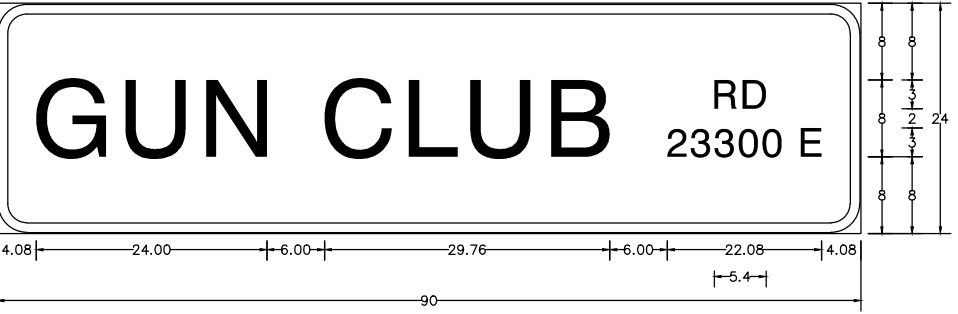
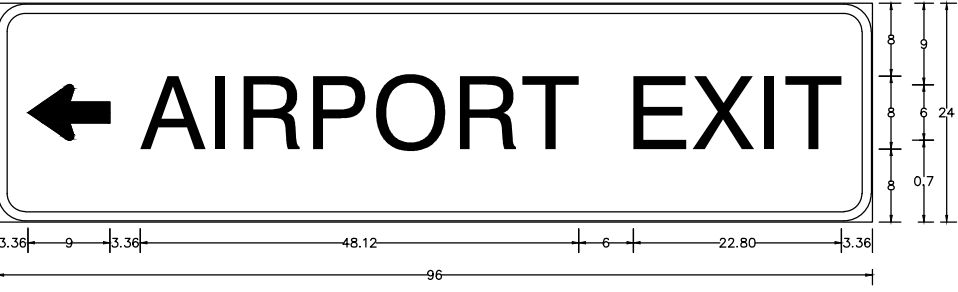
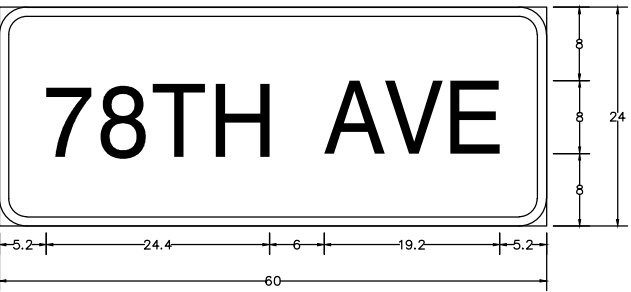
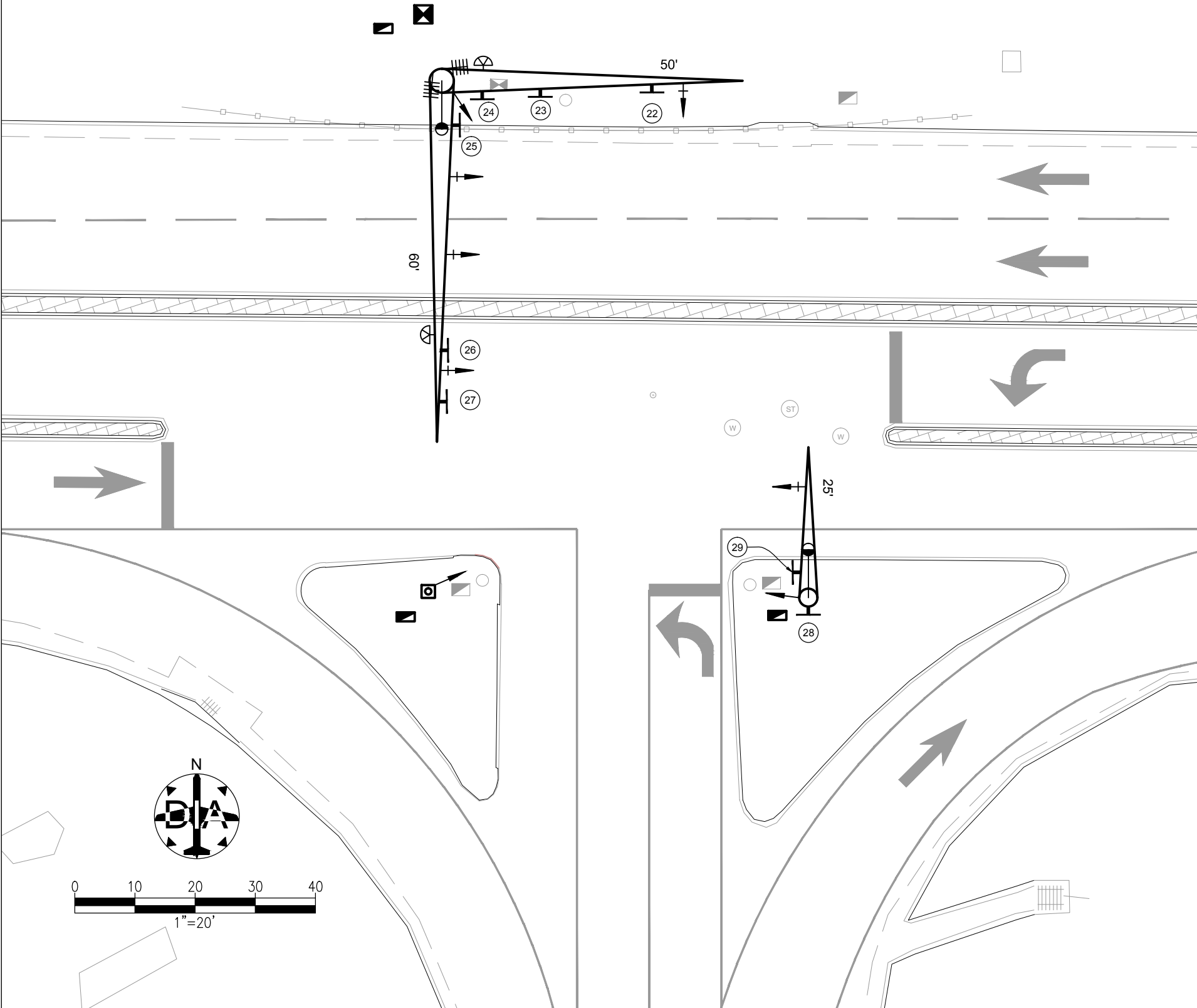
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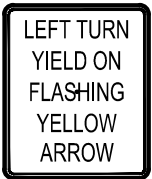
DENVER INTERNATIONAL AIRPORT
PLANNING & DEVELOPMENT
AIRPORT OFFICE BUILDING, 7th FLOOR
8500 PENA BOULEVARD
DENVER, CO 80249-6340

As Constructed	78TH AVE TRAFFIC SIGNAL REPLACEMENT JACKSON GAP SIGNING & STRIPING PLAN			Const. Contract No.
No Revisions:				
Revised:	Designer: GMF	Structure Numbers		
	Detailer: MWC			
Void:	Sheet Subset: ROADWAY	Subset Sheets: 3 of 4		Sheet Number 33

LANE USE ARROWS SHOWN
FOR INFORMATION ONLY



30R3-5L
22 26



SIGN SPECIAL (30X36)
27

Print Date: 2/1/2013	<div></div> <div></div> <div></div> <div></div> <div></div>	Sheet Revisions				DENVER INTERNATIONAL AIRPORT PLANNING & DEVELOPMENT AIRPORT OFFICE BUILDING, 7th FLOOR 8500 PENNA BOULEVARD DENVER, CO 80249-6340			As Constructed	78TH AVE TRAFFIC SIGNAL REPLACEMENT GUN CLUB SIGNING PLAN			Const. Contract No.
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