

DESIGNED BY: _____
CHECKED BY: _____
DATE: _____
SCALE: _____
LAYOUT: _____
DATE: _____
TIME: _____
DRAWING LOCATION: _____

STATE OF ALASKA

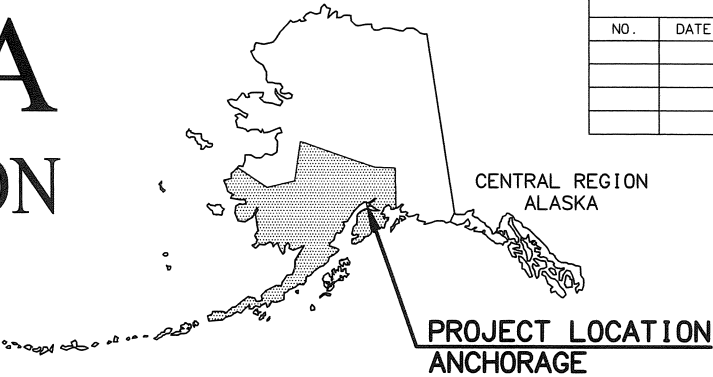
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

HSIP 12: GLENN HIGHWAY AND MULDOON ROAD INTERCHANGE SIGNALS

PROJECT NO. HHE-OA16(44)/54713

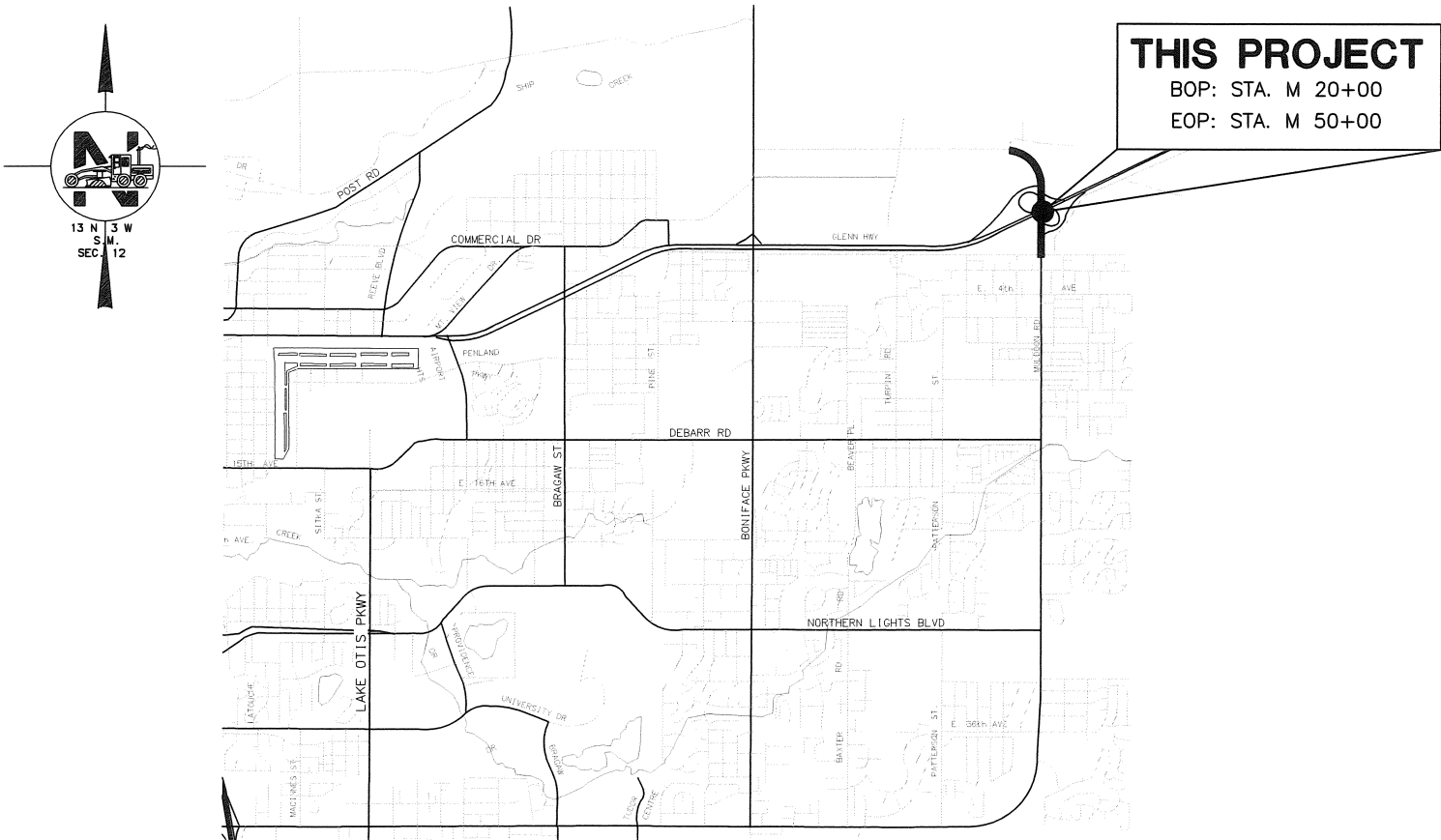
SIGNALIZATION, PAVING, SIGNING & STRIPING



REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL 'A' SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-OA16(44)/54713	2013	A1	A5
						PLAN SET TOTAL	27
				ROUTE: 133900	MILEPOINT: 3.1 - 3.5		

PROJECT SUMMARY	
WORK ELEMENT	LENGTH
TRAFFIC SIGNAL INTERCONNECT	1967 FT
DIRECTIONAL DRILLING	894 FT
TRENCHING	1676 FT

DESIGN DESIGNATIONS		
ROADWAY SECTION	A.A.D.T. 2011	DESIGN SPEED
BOUNDARY AVENUE TO INTERCHANGE	22000	40 MPH
INTERCHANGE TO HERITAGE CENTER DRIVE		35 MPH



PLANS DEVELOPED BY: LOUNSBURY & ASSOCIATES, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES

STATE OF ALASKA
★ 49TH ★
JOSHUA E. CROSS
CE 11222
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
★ 49TH ★
JOHN R. LINNELL
CE 9488
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
★ 49TH ★
CARLA SMITH
CE 11385
REGISTERED PROFESSIONAL ENGINEER

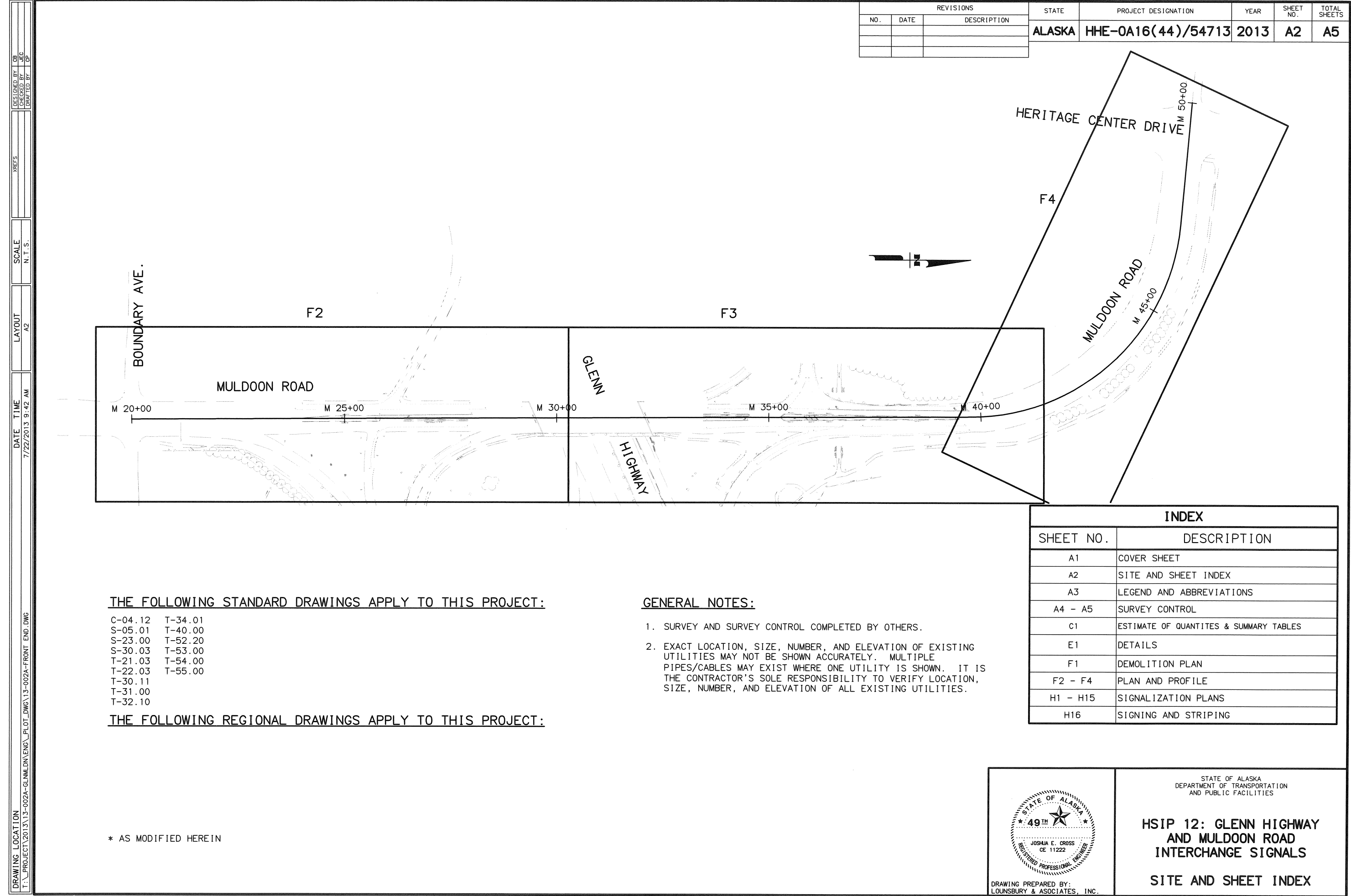
APPROVED:

REGIONAL PRE-CONSTRUCTION ENGINEER _____ DATE _____

CONCUR:

DIRECTOR, DESIGN & CONSTRUCTION _____ DATE _____
CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER _____ DATE _____



DESIGNED BY
CHECKED BY
DATE
SCALE
LAYOUT
DATE
TIME
DRAWING LOCATION

7/18/2013 8:48 AM
T:\PROJECT\2013\13-002A-GLNMLDN\ENG_PLOT_DWG\13-002A-FRONT END.DWG

UTILITIES

EXISTING

PROPOSED

PIPELINES:
STORM DRAIN
MANHOLE STORM DRAIN
CURB INLET CATCH BASIN
FIELD INLET CATCH BASIN
PIPE CULVERT w/ END SECTION
SANITARY SEWER
MANHOLE SANITARY SEWER
WATER
FIRE HYDRANT
VALVE OR RISER
NATURAL GAS
ELECTRIC
UTILITY POLE
UTILITY POLE WITH LUMINAIRE
GUY POLE
GUY WIRE ANCHOR
ELECTRICAL PEDESTAL
ELECTRICAL TRANSFORMER
ELECTRIC METER
ELECTRIC MANHOLE
TELEPHONE
TELEPHONE PEDESTAL
TELEPHONE MANHOLE
FIBER OPTIC
FIBER OPTIC MANHOLE
CABLE TV
CABLE T.V. PEDESTAL
UNDERGROUND ELECTRIC CROSSING
UNDERGROUND FIBER OPTIC CROSSING

EXISTING

PROPOSED

MISCELLANEOUS
BUILDING
PRIVATE SIGN
POST/BOLLARDS
TRAFFIC SIGN

RIGHT OF WAY

EXISTING

PROPOSED

PRIMARY CENTERLINE MONUMENT
SECONDARY CENTERLINE MONUMENT
PROJECT RIGHT-OF-WAY LINES
PROJECT CENTERLINE
EXISTING UTILITY EASEMENT LINE
EXISTING TOPOGRAPHY
CONIFER TREE OR TREES
DECIDUOUS TREE OR TREES
SHRUB OR SHRUBS
DRAINAGE FLOW
CONTOURS - MAJOR
CONTOURS - MINOR
ROADWAY
ROADWAY OBLITERATION
EDGE OF PAVEMENT
CONCRETE CURB
CONCRETE CURB & GUTTER
CONCRETE CURB CUT
SIDEWALK
DRIVEWAY APPROACH
GRAVEL EDGE
PATH / TRAIL
BRIDGE
TUNNEL
FENCE
RETAINING WALL
HEAD & WINGWALLS
GUARDRAIL
END SECTION

STRIPING

PROPOSED

8" WHITE SOLID STRIPE
4" WHITE SOLID STRIPE
4" WHITE SKIP STRIPE
8" WHITE LANE GUIDE SKIP
8" YELLOW SOLID STRIPE
4" YELLOW SOLID STRIPE
4" YELLOW SKIP STRIPE
STRIPING CHANGE STATION INTERVAL
2' CROSSWALK OR STOPBAR
TYPICAL PAINTED MEDIAN

TRAFFIC ENGINEERING

EXISTING

PROPOSED

LOAD CENTER
TRAFFIC CONTROLLER
BEACON CONTROLLER
TYPE 1A JUNCTION BOX
TYPE II JUNCTION BOX
TYPE III JUNCTION BOX
TYPE IV JUNCTION BOX
ELECTROLIER
HIGHTOWER
SIGNAL POLE WITH MASTARM
VEHICULAR SIGNAL
VEHICULAR SIGNAL LEFT
VEHICULAR SIGNAL RIGHT
OPTICAL DETECTOR
CAMERA DETECTOR
LOOP DETECTOR
ANTENNA, YAGI OR OMNI
MASTARM BEACON
LOOP DETECTOR CONDUIT
SIGNAL CONDUIT
LIGHTING CONDUIT
SIGNAL & LIGHTING CONDUIT
CONDUIT BORING
CONDUIT SIZE IN INCHES
SIGN POST

REVISIONS

STATE

PROJECT DESIGNATION

YEAR

SHEET NO.

TOTAL SHEETS

ABBREVIATIONS

SEE SHEET H1 FOR ADDITIONAL TRAFFIC ENGINEERING LEGEND AND ABBREVIATIONS.

STATE OF ALASKA
49TH
JOSHUA E. CROSS
REGISTERED PROFESSIONAL ENGINEER
CE 11222

DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HSIP 12: GLENN HIGHWAY
AND MULDOON ROAD
INTERCHANGE SIGNALS
LEGEND AND ABBREVIATONS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	C1	C1

ESTIMATE OF QUANTITIES			
ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQ'D
608(7)	ASPHALT PATHWAY	TON	20
615(1)	STANDARD SIGN	SQUARE FOOT	84
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641(1)	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641(2)	TEMPORARY, EROSION, SEDIMENT AND POLLUTION CONTROL	CONTINGENT SUM	ALL REQ'D
641(6)	WITHHOLDING	CONTINGENT SUM	ALL REQ'D
641(7)	SWPPP MANAGER	LUMP SUM	ALL REQ'D
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
642(3A)	THREE PERSON SURVEY PARTY	CONTINGENT SUM	ALL REQ'D
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643(3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQ'D
643(15)	FLAGGING	CONTINGENT SUM	ALL REQ'D
643(23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643(25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
646(1)	CPM SCHEDULING	LUMP SUM	ALL REQ'D
647(5)	BACKHOE, 4WD, 1 CY BUCKET, 75 HP MIN, 15 FT DEPTH	CONTINGENT SUM	ALL REQ'D
660(1A)	TRAFFIC SIGNAL SYSTEM COMPLETE (SOUTH INTERSECTION)	LUMP SUM	1
660(1B)	TRAFFIC SIGNAL SYSTEM COMPLETE (NORTH INTERSECTION)	LUMP SUM	1
660(15)	TRAFFIC SIGNAL SYSTEM MODIFICATIONS	LUMP SUM	1
661(2)	LOAD CENTER, TYPE 1A	EACH	2
662(1)	SIGNAL INTERCONNECT	LINEAR FOOT	3300
670(10)	MMA PAVEMENT MARKINGS, INLAID 250 MILS	LUMP SUM	ALL REQ'D
682(1)	VAC-TRUCK POTHOLE	CONTINGENT SUM	ALL REQ'D

608(7) ASPHALT PATHWAY						
SHEET	FROM STATION	OFFSET	TO STATION	OFFSET	LENGTH	REMARKS
F2	M 20+84	67 RT	M 22+54	68 RT	170	

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**HSIP 12: GLENN HIGHWAY
AND MULDOON ROAD
INTERCHANGE SIGNALS**

**ESTIMATE OF QUANTITIES
& SUMMARY TABLES**

DRAWING LOCATION
T:\PROJECT\2013\13-002A-GLN\DWG\ENG\13-002A-FRONT END.DWG

DATE
7/18/2013

TIME

LAYOUT
E1

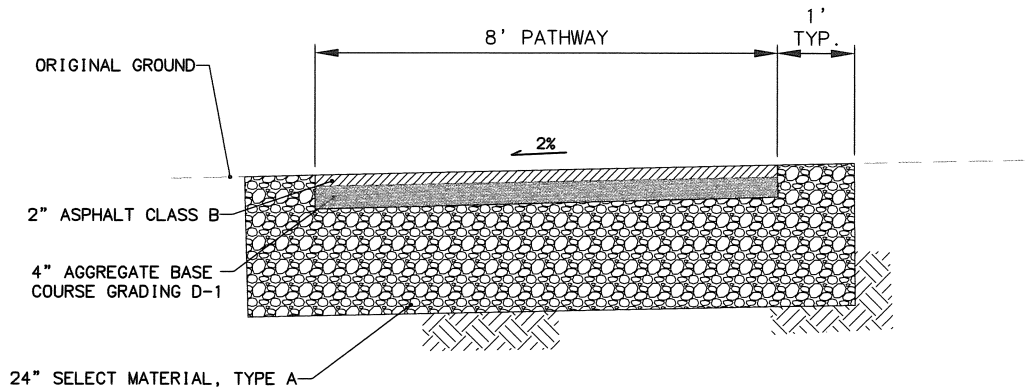
SCALE
N.T.S.

XREF'S

DESIGNED BY
CHECKED BY
DRAWN BY

DB
JC
JC

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	E1	E1



NOTE:
1. SEE PLANS FOR LIMITS OF PATHWAY REPLACEMENT.

1
E1

PATHWAY REPLACEMENT
SHEET: F2 - STA. M 20+84 TO M 22+54 RT. *NTS*

DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**HSIP 12: GLENN HIGHWAY
AND MULDOON ROAD
INTERCHANGE SIGNALS
DETAILS**

DESIGNED BY: JCB
CHECKED BY: JEC
DRAFTED BY: JOP

SCALE: N.T.S.

LAYOUT: DEMOLITION PLAN

DATE: 7/22/2013

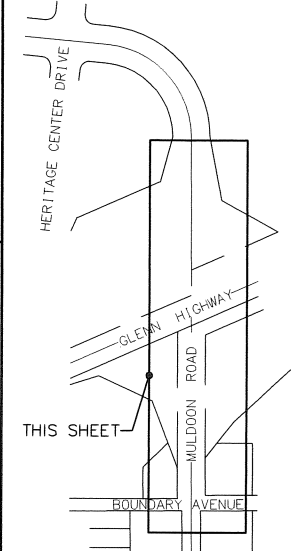
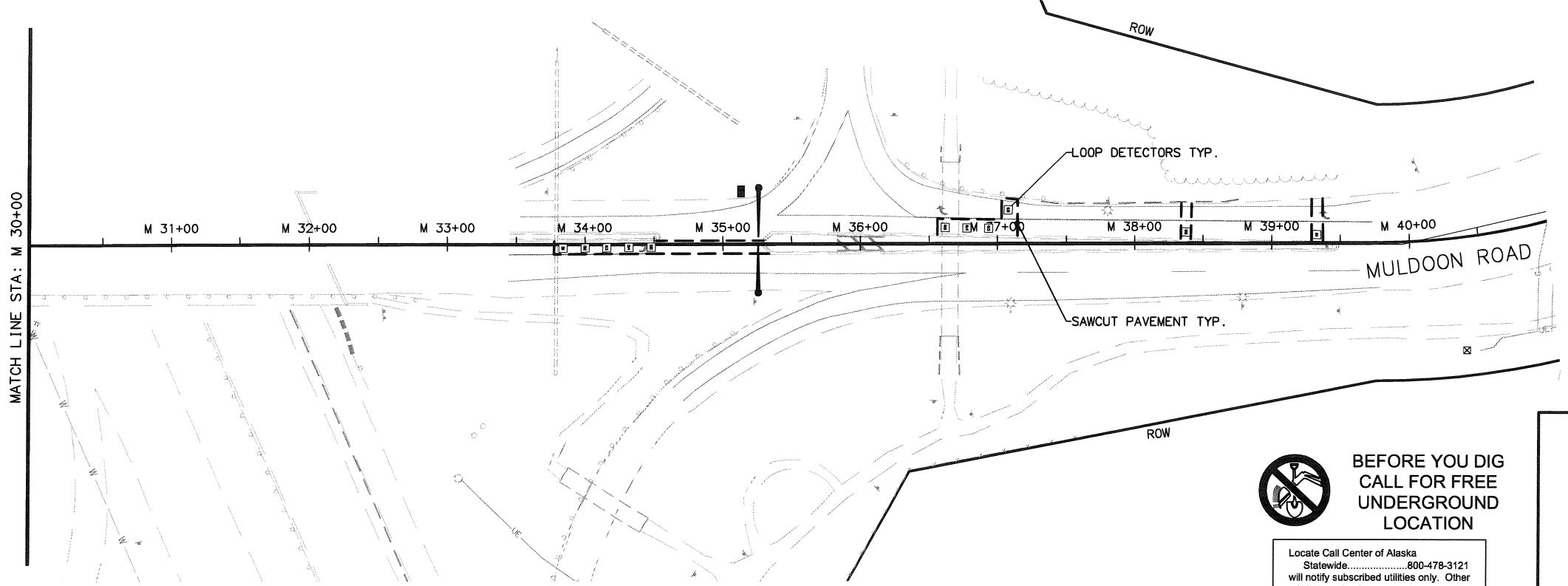
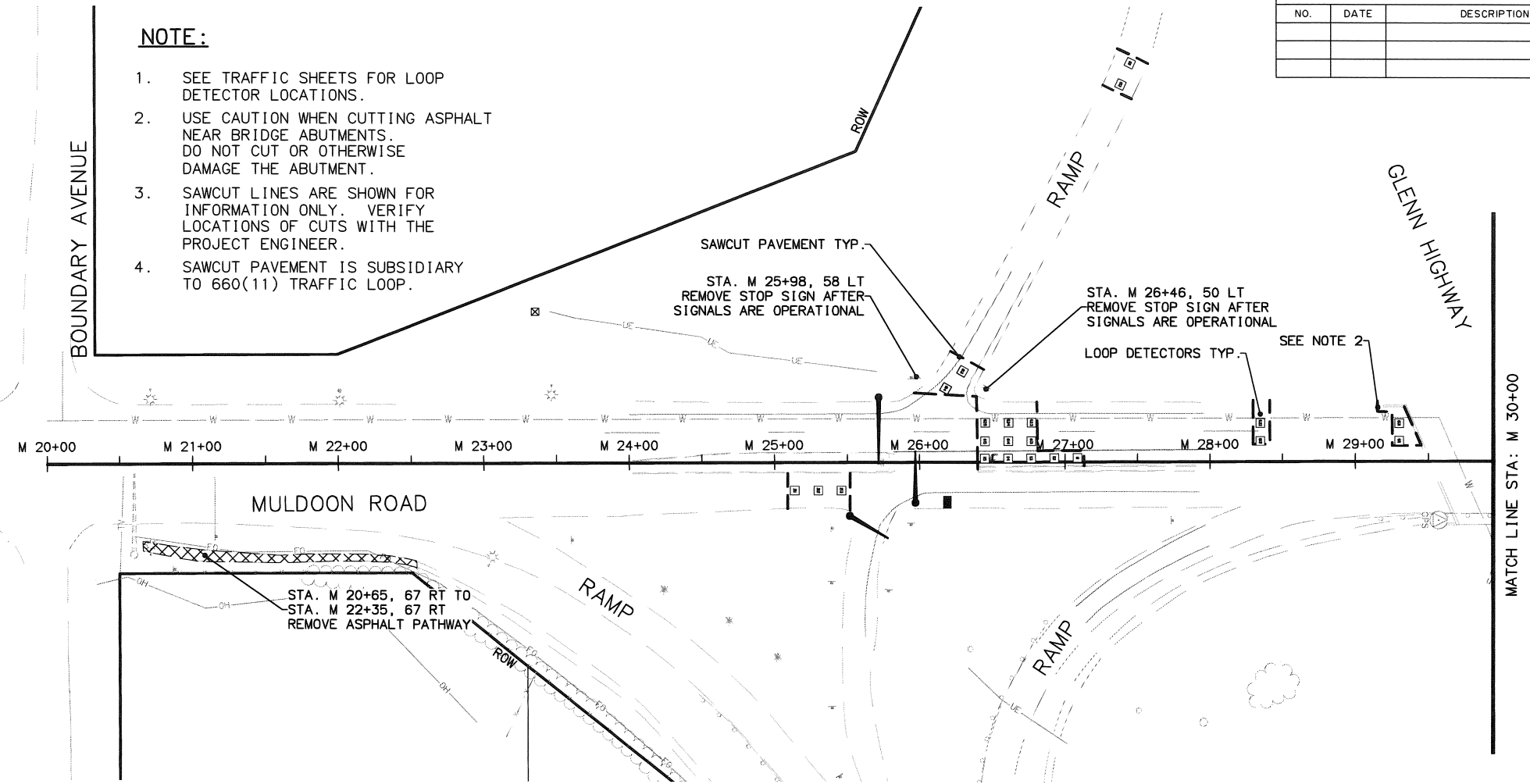
DRAWING LOCATION: T:\PROJECT\2013\13-002A-GLN\LDN\ENG\13-002A-GLN\DWG\13-002A-DEM.DWG

NOTE:

1. SEE TRAFFIC SHEETS FOR LOOP DETECTOR LOCATIONS.
2. USE CAUTION WHEN CUTTING ASPHALT NEAR BRIDGE ABUTMENTS. DO NOT CUT OR OTHERWISE DAMAGE THE ABUTMENT.
3. SAWCUT LINES ARE SHOWN FOR INFORMATION ONLY. VERIFY LOCATIONS OF CUTS WITH THE PROJECT ENGINEER.
4. SAWCUT PAVEMENT IS SUBSIDIARY TO 660(11) TRAFFIC LOOP.

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HHE-0A16(44)/54713	2013	F1	F4



BEFORE YOU DIG
CALL FOR FREE
UNDERGROUND
LOCATION

Locate Call Center of Alaska
Statewide.....800-478-3121
will notify subscribed utilities only. Other
utilities need to be contacted individually.



DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.

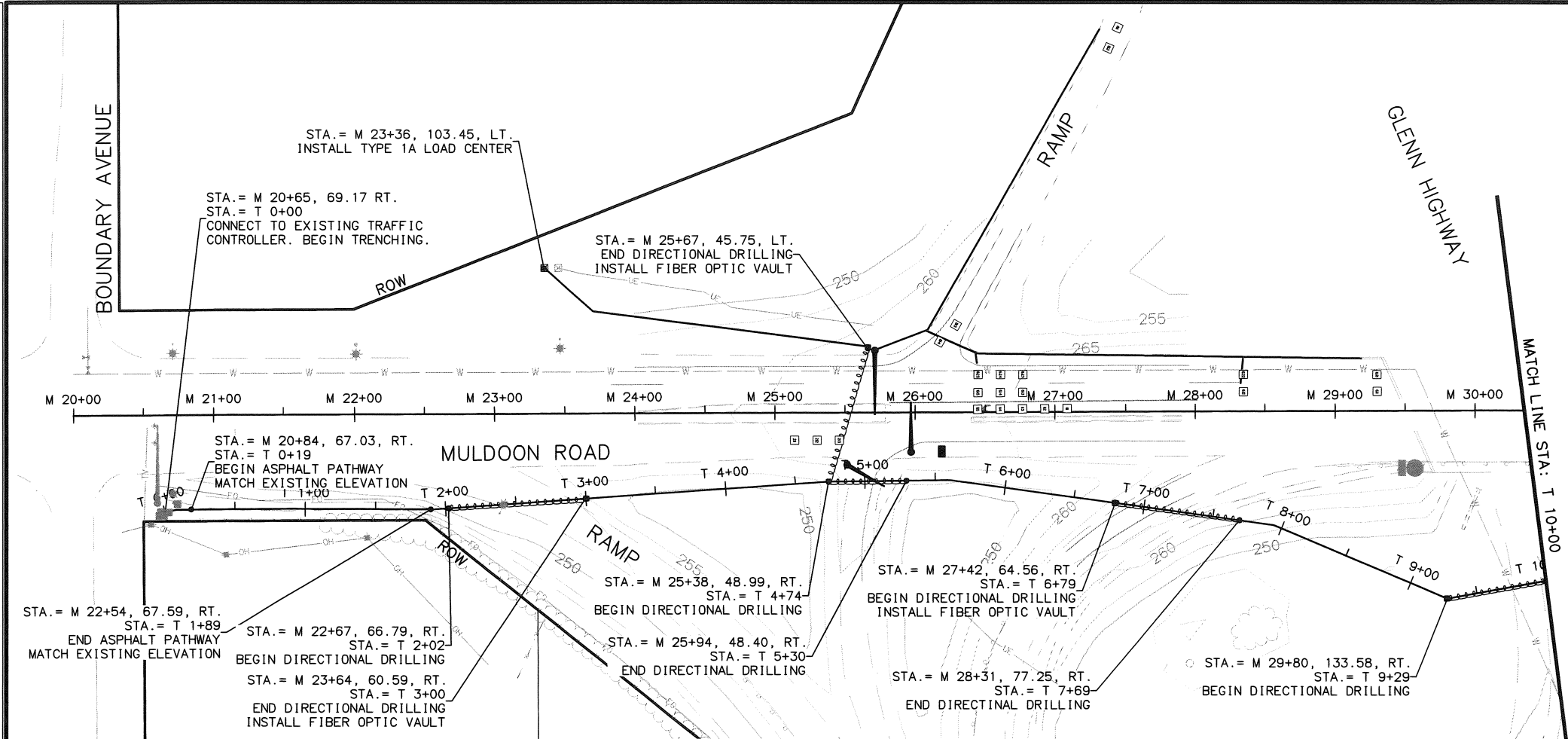
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**HSIP 12: GLENN HIGHWAY
AND MULDOON ROAD
INTERCHANGE SIGNALS**

PLAN VIEW

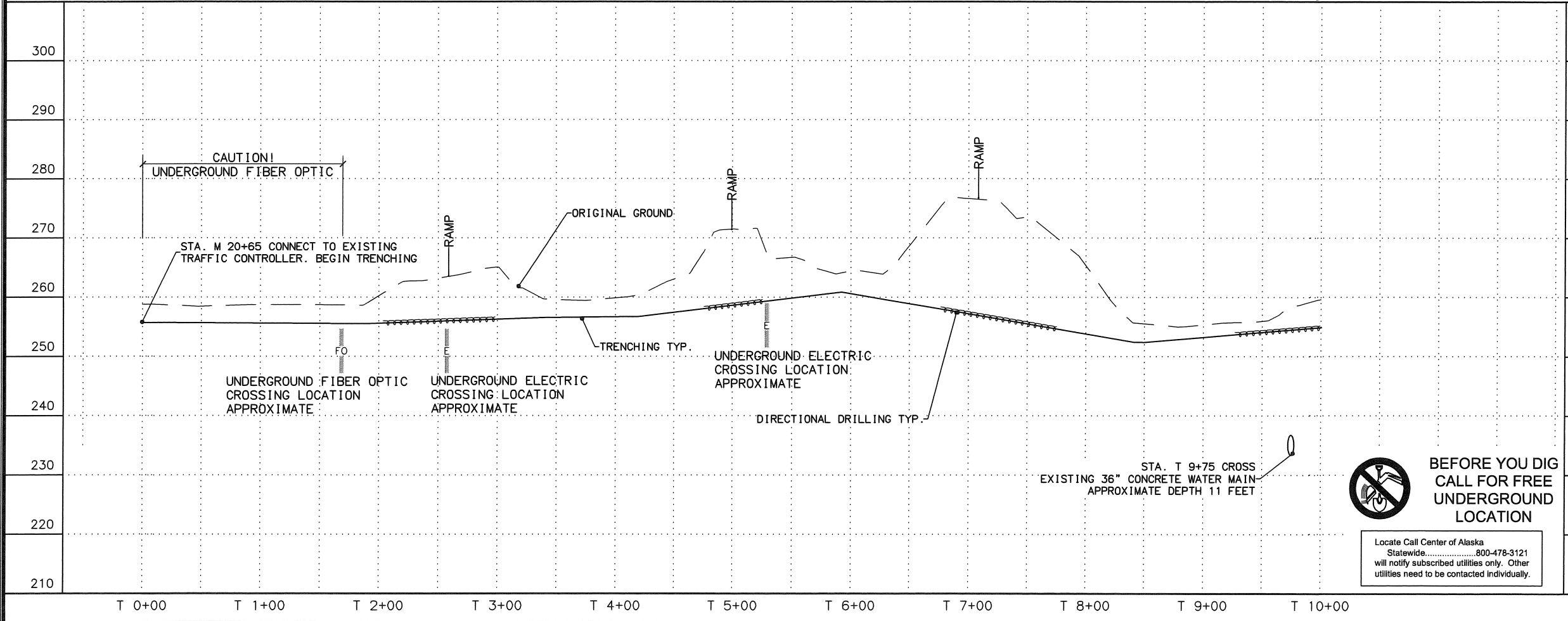
DEMOLITION PLAN

DESIGNED BY: CEC
CHECKED BY: CEC
DATE: 7/22/2013
SCALE: 1"=40'
LAYOUT: STA. T 0+00 - STA. T 10+00
DATE: 7/22/2013
DRAWING LOCATION: T:\PROJECT\2013\13-002A-GLN\MLN\ENG\ PLOT_JWG\13-002A_PBP.DWG



NOTES:

1. PROFILE STATIONING REFERENCES TRENCHING/DIRECTIONAL DRILLING ALIGNMENT.
2. SEE TRAFFIC SHEETS FOR LOOP DETECTOR LOCATIONS.
3. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND USE CAUTION DURING TRENCHING AND DIRECTIONAL DRILLING ACTIVITIES.



BEFORE YOU DIG
CALL FOR FREE
UNDERGROUND
LOCATION

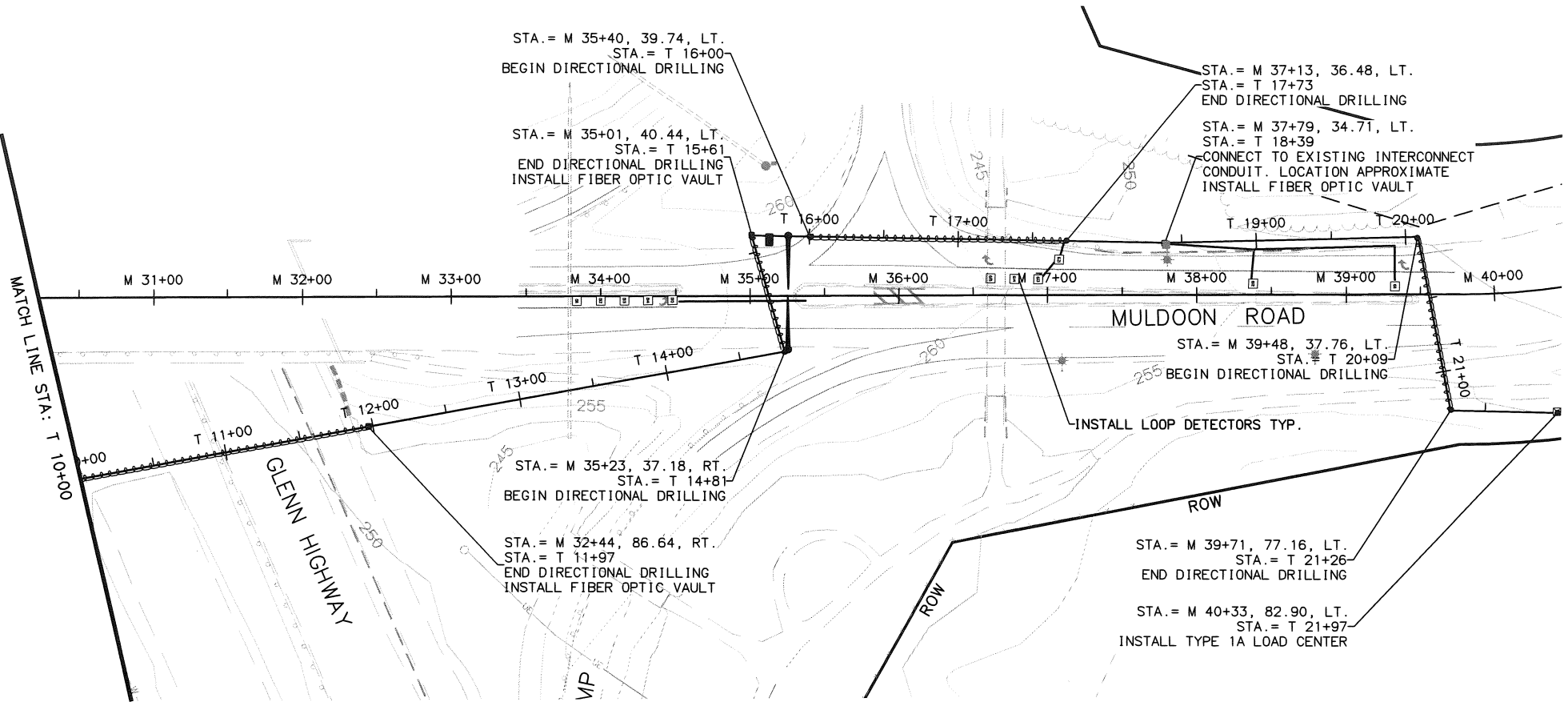
Locate Call Center of Alaska
Statewide.....800-478-3121
will notify subscribed utilities only. Other
utilities need to be contacted individually.

SHEET NO.	TOTAL SHEETS	
F2	F4	
STATE	YEAR	
ALASKA	2013	
PROJECT DESIGNATION		
HHE-0A16(44)/54713		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

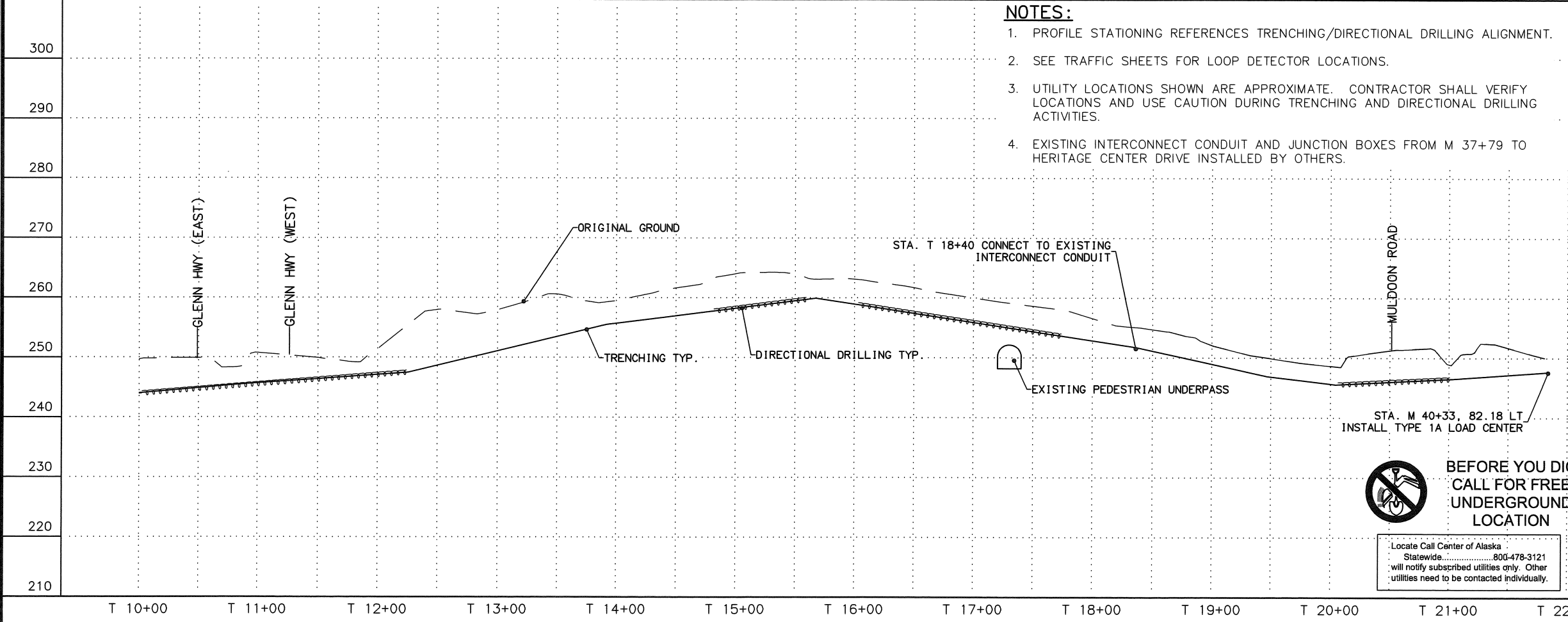
HERITAGE CENTER DRIVE
GLENN HIGHWAY
MULDOON ROAD
BOUNDARY AVENUE
THIS SHEET

DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HSIP 12: GLENN HIGHWAY AND
MULDOON ROAD INTERCHANGE
SIGNALS
PLAN & PROFILE
STA. T 0+00 -
STA. T 10+00

DESIGNED BY: JEC
DRAWN BY: JEC
SCALE: 1"=40'
DATE: 7/22/2013
TIME: 10:00 - STA. T 22+00
DRAWING LOCATION: T:\PROJECT\2013\13-002A-GLNMLDN\ENG\ PLOT_DWG\13-002A_P&P.DWG



- NOTES:**
1. PROFILE STATIONING REFERENCES TRENCHING/DIRECTIONAL DRILLING ALIGNMENT.
 2. SEE TRAFFIC SHEETS FOR LOOP DETECTOR LOCATIONS.
 3. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND USE CAUTION DURING TRENCHING AND DIRECTIONAL DRILLING ACTIVITIES.
 4. EXISTING INTERCONNECT CONDUIT AND JUNCTION BOXES FROM M 37+79 TO HERITAGE CENTER DRIVE INSTALLED BY OTHERS.



**BEFORE YOU DIG
CALL FOR FREE
UNDERGROUND
LOCATION**

Locate Call Center of Alaska
Statewide.....800-478-3121
will notify subscribed utilities only. Other
utilities need to be contacted individually.

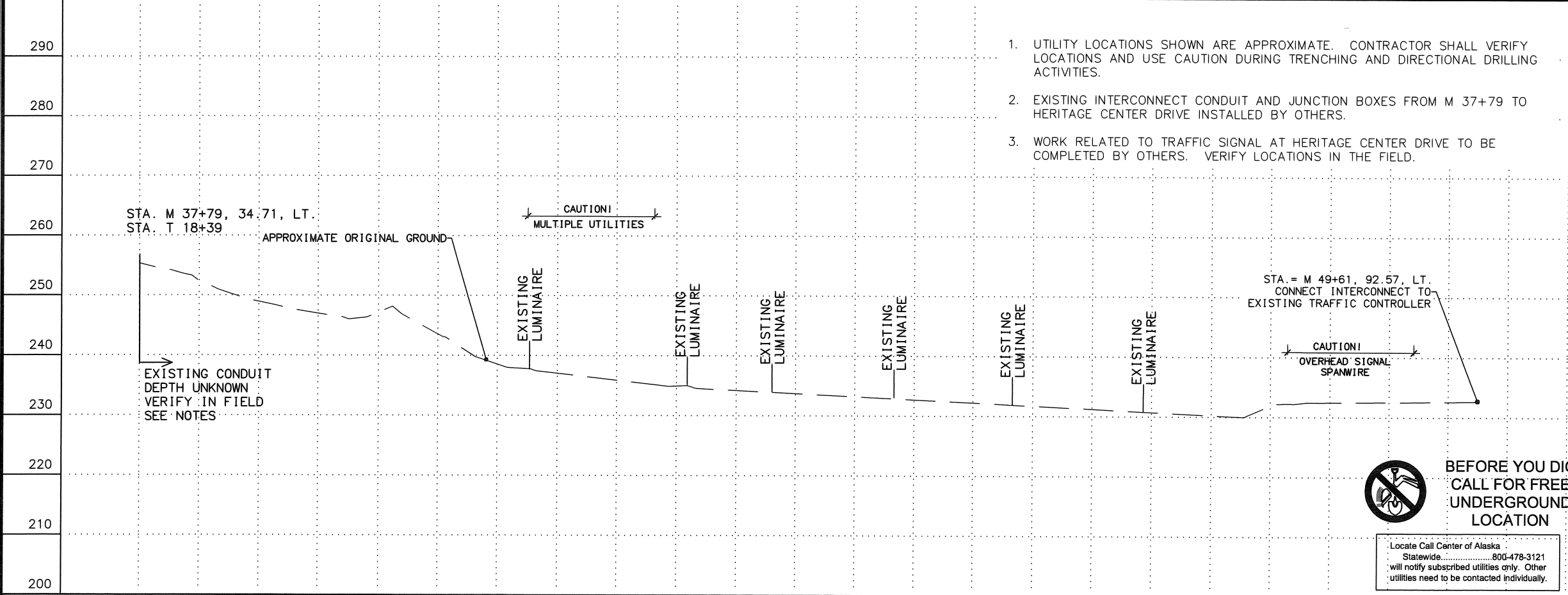
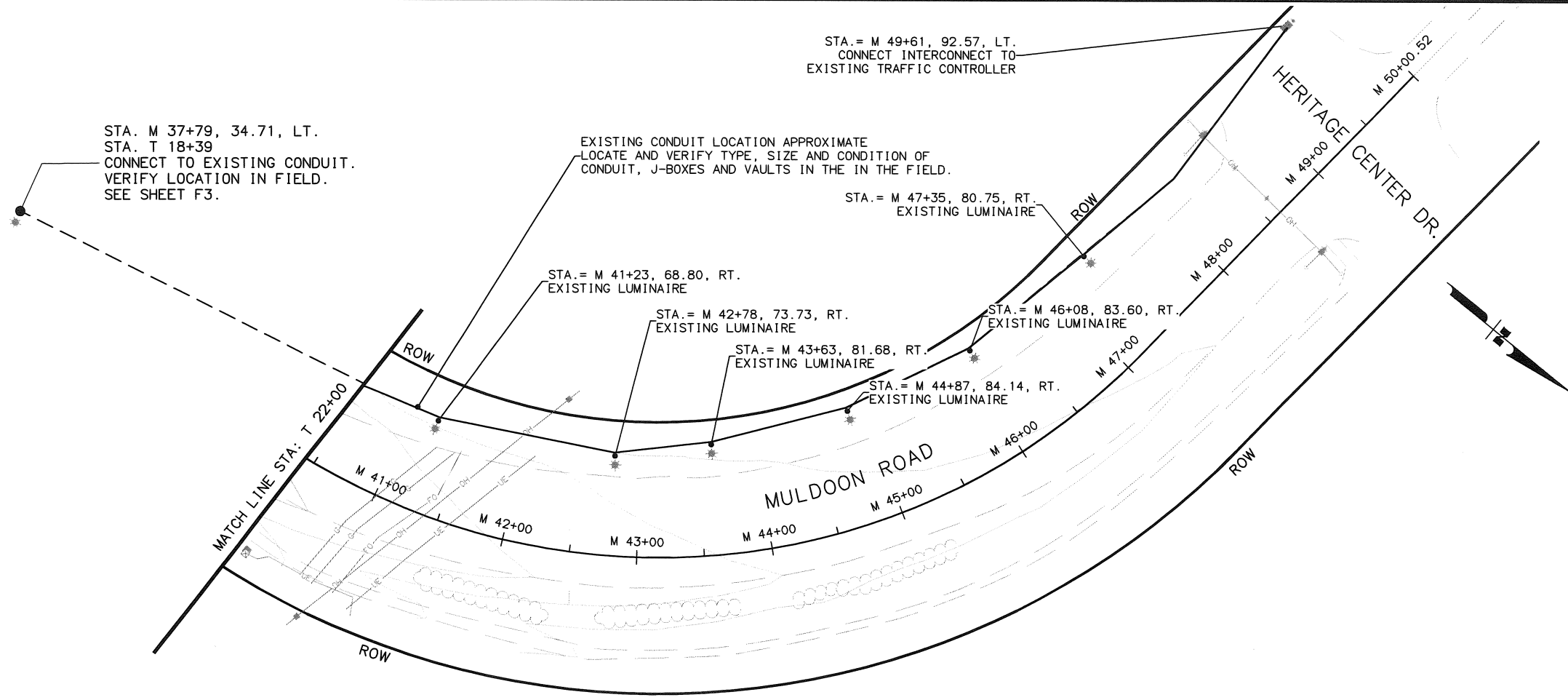
SHEET NO.	TOTAL SHEETS	
F3	F4	
STATE	YEAR	
ALASKA	2013	
PROJECT DESIGNATION		
HHE-0A16(44)/54713		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HIGHWAY AND
MULDOON ROAD INTERCHANGE
SIGNALS

PLAN & PROFILE
STA. T 10+00 -
STA. T 22+00

DESIGNED BY: CEC
CHECKED BY: CEC
DATE: 7/22/2013
SCALE: 1"=40'
LAYOUT: STA. T 22+00 - STA. T 22+00
DATE: 7/22/2013
DRAWING LOCATION: T:\PROJECT\2013\13-002A-GLN\DWG\13-002A-P&P.DWG



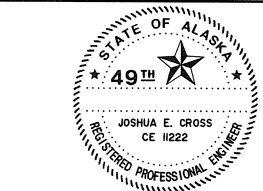
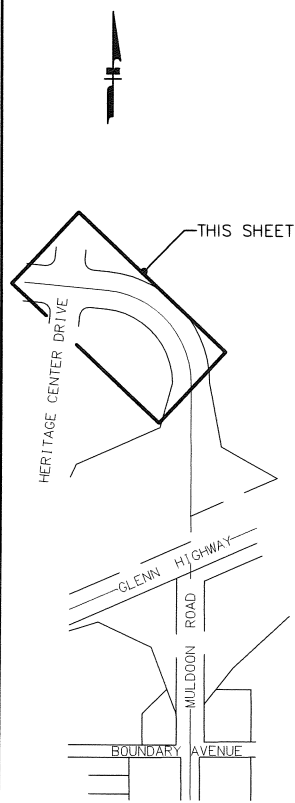
1. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND USE CAUTION DURING TRENCHING AND DIRECTIONAL DRILLING ACTIVITIES.
2. EXISTING INTERCONNECT CONDUIT AND JUNCTION BOXES FROM M 37+79 TO HERITAGE CENTER DRIVE INSTALLED BY OTHERS.
3. WORK RELATED TO TRAFFIC SIGNAL AT HERITAGE CENTER DRIVE TO BE COMPLETED BY OTHERS. VERIFY LOCATIONS IN THE FIELD.



**BEFORE YOU DIG
CALL FOR FREE
UNDERGROUND
LOCATION**

Locate Call Center of Alaska
Statewide.....800-478-3121
will notify subscribed utilities only. Other
utilities need to be contacted individually.

SHEET NO.		TOTAL SHEETS	
F4		F4	
STATE		YEAR	
ALASKA		2013	
PROJECT DESIGNATION			
HHE-0A16(44)/54713			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	



DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HIGHWAY AND
MULDOON ROAD INTERCHANGE
SIGNALS

PLAN & PROFILE
STA. T 22+00 -
HERITAGE CENTER DRIVE

DESIGNED BY: MEF
CHECKED BY: CLB
DATE: 12/19/2012

SCALE: N/A

LAYOUT: H1

DATE: 7/16/2013 10:29 AM

ROY

DRAWING LOCATION: P:\Projects\ounabury\Muldoon-Glenn Improvements\Drawings\DOT Std Details\H1_Traffic-Legend-AND-NOTES.dwg

SYMBOL LEGEND

EXISTING

PROPOSED

LOAD CENTER

TRAFFIC CONTROLLER

BEACON CONTROLLER

TYPE 1A JUNCTION BOX

TYPE 1I JUNCTION BOX

TYPE 1II JUNCTION BOX

TYPE 1V JUNCTION BOX

ELECTROLIER

HIGHTOWER

SIGNAL POLE WITH MASTARM

PEDESTRIAN PUSH BUTTON

PEDESTRIAN SIGNAL

VEHICULAR SIGNAL

VEHICULAR SIGNAL LEFT

VEHICULAR SIGNAL RIGHT

OPTICAL DETECTOR

GPS DETECTOR

CAMARA DETECTOR

RADAR DETECTOR

LOOP DETECTOR

ANTENNA, YAGI OR OMNI

MASTARM BEACON

RURAL BEACON

SCHOOL ZONE BEACON

LOOP DETECTOR CONDUIT

SIGNAL CONDUIT

LIGHTING CONDUIT

SIGNAL & LIGHTING CONDUIT

CONDUIT BORING

CONDUIT SIZE IN INCHES

SIGN POST

PAVEMENT MARKING LEGEND

PROPOSED

8"W

4"W

4"W SKIP

8"W GUIDE SKIP

8"Y

4"Y

4"Y SKIP

+20

10'

12'

3"

18"Y @ 45°

CONDUIT SIZE

NUMBER OF CABLES REQUIRED

NUMBER OF INSULATED CONDUCTORS(C) OR PAIRS(PR), IF OTHER THEN SINGLE CONDUCTOR

CONDUCTOR SIZE IN AWG

END OF CIRCUIT SYMBOL (ROTATE TO POINT IN DIRECTION OF CIRCUIT)

CIRCUIT NUMBER

LEFT-TURN SIGNAL FACE, MOUNT RIGHT OF DOOR

BACKPLATE

SIDE MOUNT BRACKETS

TERMINAL COMPARTMENT DOOR

TERMINAL COMPARTMENT

POLE SHAFT

ABBREVIATIONS

SIG - SERVICE TO CONTROLLER

INTX - INTERSECTION

LTG - LIGHTING

PRE 2 - PREEMPTION #

PRE CON 2 - PREEMPTION CONTROLLER #

LC - LOAD CENTER

TC - TRAFFIC CONTROLLER

P1 - TRAFFIC SIGNAL POLE #

PEC - PHOTOELECTRIC CELL

YAGI - DIRECTIONAL ANTENNA

OMNI - OMNI DIRECTIONAL ANTENNA

HEAD - VEHICULAR SIGNAL HEAD

PED B 28 - PEDESTRIAN PUSH BUTTON #

PEDI - PEDESTRIAN SIGNAL HEAD

RMC - RIGID METAL CONDUIT

PE - POLYETHYLENE CONDUIT

LFNC - LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT

INTX L - INTERSECTION LIGHTING

NB - NORTH BOUND

EB - EAST BOUND

SB - SOUTH BOUND

WB - WEST BOUND

NOTES:

FOUNDATIONS NOTES:

1. STATION & C.L. REFERENCE ARE TO THE CENTER OF THE STRUCTURE, EXCEPT ON LOOPS WHICH ARE TO THE CENTER OF THE TRAILING EDGE OF THE LOOP (EDGE NEAREST INTERSECTION).

2. JUNCTION BOX LOCATIONS APPROXIMATE. LOCATE J-BOXES SO THAT THEY ARE LOCATED OUT OF THE PATHWAY, SIDEWALK, CURB RAMPS, AND DRAINAGE COLLECTION AREAS.

3. INSTALL LOAD CENTER AND TRAFFIC CONTROLLER FOUNDATIONS WITHIN 1-DEGREE OF PLUMB.

4. INSTALL ANCHOR BOLTS IN CAST FOUNDATIONS TO BE WITHIN 1:40 OF PLUMB.

SIGNAL SYSTEM NOTES:

1. FURNISH THE SIGNAL AND LUMINAIRE MASTARM LENGTHS AND DIMENSIONS SPECIFIED ON THE POLE ELEVATIONS.

2. INSTALL DEVICES SUCH THAT THE DIMENSIONS SHOWN TO THE BOTTOM OF THE DEVICES ON THE POLE ELEVATIONS ARE MINIMUMS. VERTICAL DIMENSIONS TO SIGNAL HEADS ARE TO BOTTOM OF THE BACK PLATE.

3. INSTALL MAST ARMS PERPENDICULAR TO THE ROADWAY CENTERLINE. ACCEPTABLE VARIANCE IS +/- 1-DEGREE.

4. SALVAGE SIGNAL POLE ASSEMBLIES, SIGNS, SIGNAL FACES, AND LUMINARIES AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48-HOURS OF DECOMMISSIONING. COMPONENTS DAMAGED WHILE IN THE CONTRACTORS CUSTODY MUST BE REPLACED AT THE CONTRACTORS EXPENSE. REMOVE AND DISPOSE OF FOUNDATIONS.

5. SALVAGE EXISTING CONTROLLER CABINET AFTER NEW CONTROLLER CABINET IS IN SERVICE AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48-HOURS OF DECOMMISSIONING.

6. VEHICLE SIGNALS AND PEDESTRIAN SIGNALS SHALL BE LED MODULES.

7. REMOVE ABANDONED OR UNUSED TRAFFIC JUNCTION BOXES UNLESS OTHERWISE NOTED.

8. NEW SIGNAL HEADS THAT ARE MOUNTED BUT NOT IN OPERATION SHALL BE COVERED WITH A COMMERCIALY AVAILABLE SIGNAL-SHIRT. EACH SIGNAL SHIRT SHALL FEATURE ELASTICIZED OPENINGS THAT FIT OVER THE VISORS AND AT LEAST TWO STRAPS TO SECURE IT TO THE SIGNAL. PROVIDE SHIRTS WITH A LEGEND THAT READS "OUT OF SERVICE" AND A CENTER SECTION THAT ALLOWS AN OPERATOR TO SEE THE INDICATIONS DURING SYSTEM TESTS.

9. SIGNAL HEADS ARE TO BE LOCATED PER FIGURE 4D-100, TYPICAL SIGNAL HEAD LOCATIONS, PER THE ALASKA TRAFFIC MANUAL. ACCEPTABLE VARIANCE IS +/- 1-FOOT.

10. AIM SIGNALS PER TABLE 660-2, THROUGH-SIGNAL AIMING POINT, OF THE SPECIAL PROVISIONS. SIGNALS SHALL ALSO BE AIMED SO AS NOT TO BE VISIBLE FROM SIDE STREET TRAFFIC. ACCEPTABLE VARIANCE IS +/- 5 DEGREES.

11. EXISTING CIRCUITS LISTED ON THE LOAD CENTER SUMMARY AND PLAN SHEETS WERE OBTAINED FROM AS-BUILT INFORMATION AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO WORK INVOLVING THOSE CIRCUITS.

REVISIONS

NO. DATE DESCRIPTION

12/19/2012 CENTRAL REGION DETAIL

STATE: ALASKA PROJECT DESIGNATION: HHE-0A16(44)/54713 YEAR: 2013 SHEET NO.: H1 TOTAL SHEETS: H16

CALL BEFORE YOU DIG!

CONTRACTOR SHALL CALL A MINIMUM OF 3 DAYS IN ADVANCE OF CONSTRUCTION

ALASKA DIGLINE...907-278-3121 OR 800-478-3121

CALL OR GO TO WWW.AKONECALL.COM/STATEWIDE.HTM FOR MEMBER LIST OF WHO WILL BE NOTIFIED

EDC, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

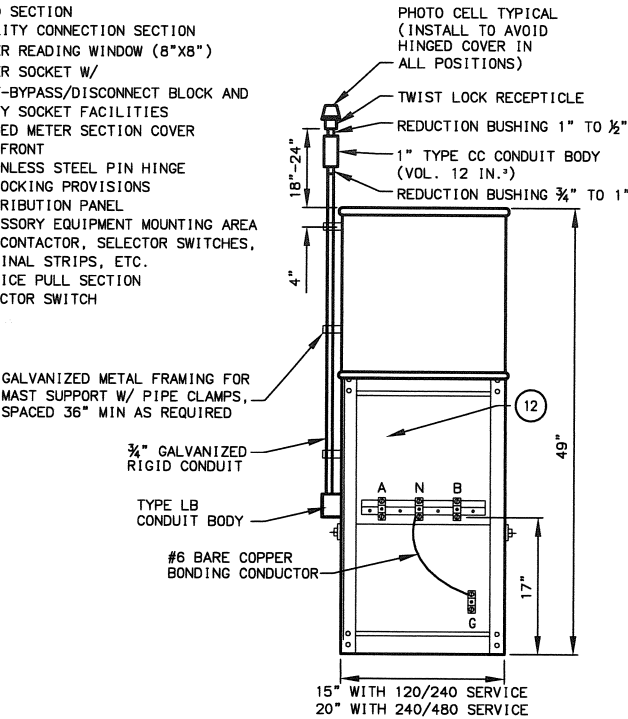
HSIP 12: GLENN HWY & MULDOON ROAD INTERCHANGE SIGNALS

TRAFFIC LEGEND AND NOTES

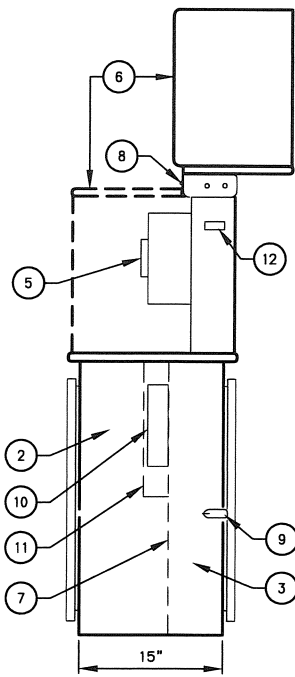
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EQUIPMENT LEGEND/DESCRIPTION

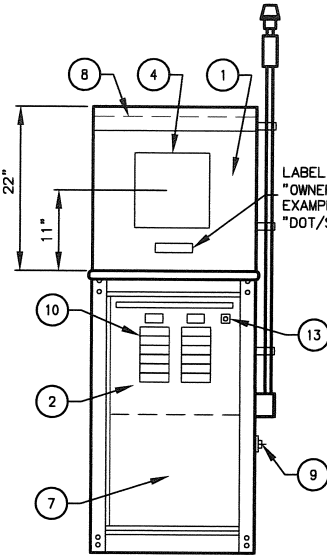
- 1. METERING SECTION
- 2. LOAD SECTION
- 3. UTILITY CONNECTION SECTION
- 4. METER READING WINDOW (8"x8")
- 5. METER SOCKET W/ TEST-BYPASS/DISCONNECT BLOCK AND SAFETY SOCKET FACILITIES
- 6. HINGED METER SECTION COVER
- 7. DEADFRONT
- 8. STAINLESS STEEL PIN HINGE
- 9. PADLOCKING PROVISIONS
- 10. DISTRIBUTION PANEL
- 11. ACCESSORY EQUIPMENT MOUNTING AREA FOR CONTACTOR, SELECTOR SWITCHES, TERMINAL STRIPS, ETC.
- 12. SERVICE PULL SECTION
- 13. SELECTOR SWITCH



REAR VIEW
(W/ DOOR REMOVED)

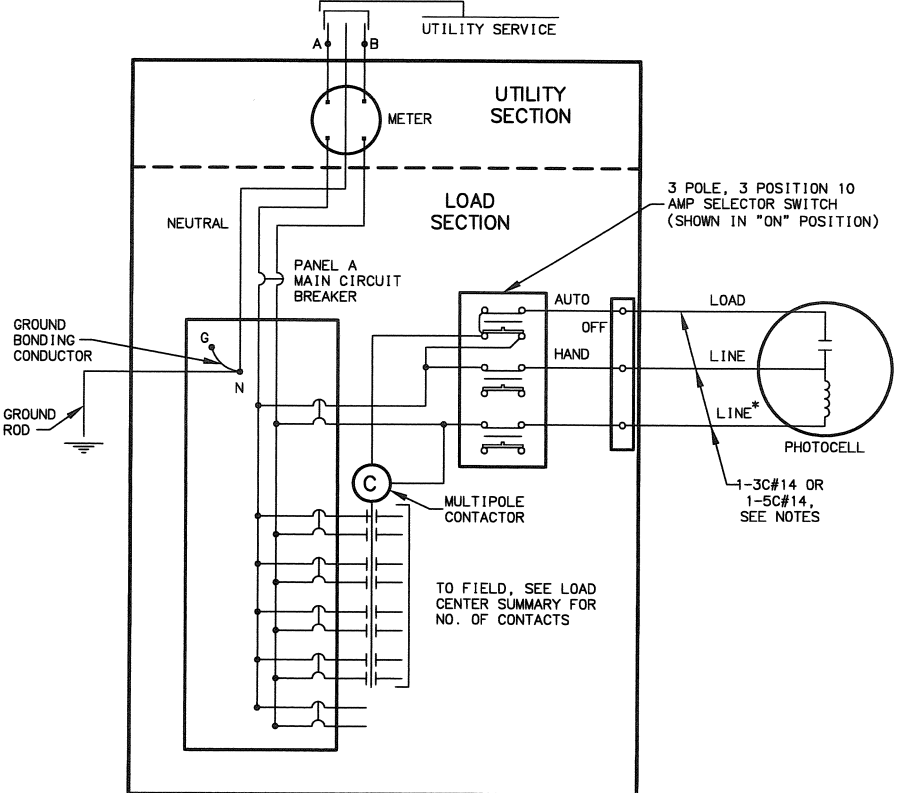


RIGHT SIDE VIEW
(W/ METER SECTION OPEN)



FRONT VIEW
(W/ DOOR REMOVED)

TYPE 1A CABINET DETAILS



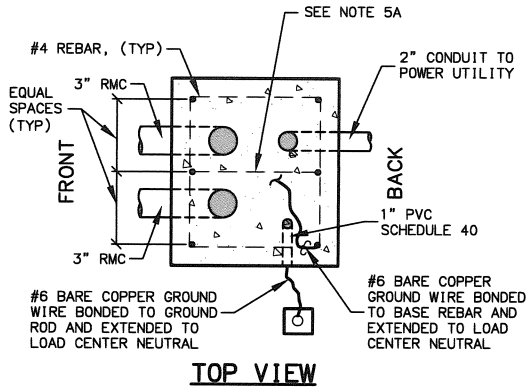
LOAD CENTER ONE LINE DIAGRAM AND
SELECTOR SWITCH WIRING

* GROUNDED NEUTRAL, IF SERVICE IS 240/480 VOLT SINGLE PHASE OR 277/480 VOLT THREE-PHASE; AND UNDERGROUND LINE, IF SERVICE IS 120/240 VOLT SINGLE PHASE.

WIRING NOTES:

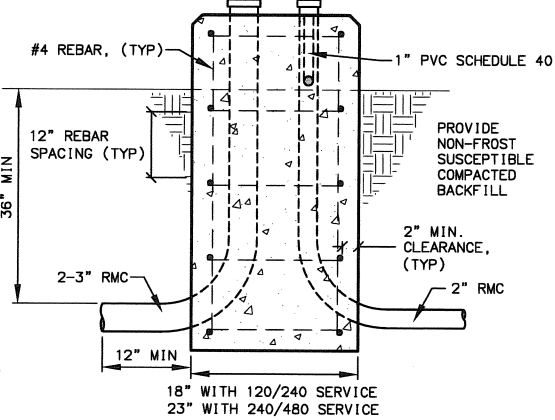
- 1. FURNISH ALL EQUIPMENT NOTED IN THE LOAD CENTER SUMMARY, PLUS TWO 20-AMP 2-POLE SPARE CIRCUIT BREAKERS, AND SPACE FOR A MINIMUM OF TWO ADDITIONAL 2-POLE CIRCUIT BREAKERS IN EACH LOAD PANEL. SEE THE LOAD CENTER SUMMARIES FOR LOAD PANEL VOLTAGES, CURRENT RATINGS, AND THE NAME OF THE SERVING UTILITY.
- 2. INSTALL GROUNDING HUBS THIRD PARTY CERTIFIED FOR WET LOCATIONS (MYERS TYPE), WHEN ATTACHING CONDUITS TO THE LOAD CENTER ENCLOSURE.
- 3. LABEL ALL CIRCUIT BREAKERS AS TO FUNCTION AND POSITION. LABEL THE SELECTOR SWITCH "LIGHTING" AND ITS POSITIONS "ON-OFF-AUTO".
- 4. METER BASES SHALL NOT BE MOUNTED ON MOVABLE PANELS OR DOORS.
- 5. THE LENGTH AND TYPE OF SERVICE ENTRANCE CONDUIT INSTALLED BY THE CONTRACTOR VARIES BY UTILITY. REGARDLESS OF ITS LENGTH, INSTALL A PULL ROPE IN THE SERVICE CONDUIT AND A CAP ON THE BURIED END; MARK THE BURIED END WITH A 2"x 6" STAKE. SEE THE LOAD CENTER SUMMARIES FOR THE FOLLOWING INFORMATION.
 - A. STATION AND OFFSET OF THE LOAD CENTER AND POWER SOURCE.
 - B. WHERE THE CONTRACTOR TERMINATES THE SERVICE ENTRANCE CONDUIT.
 - C. THE TYPE OF SERVICE ENTRANCE CONDUIT (SUCH AS RIGID METAL CONDUIT OR LIQUID-TIGHT FLEXIBLE METAL CONDUIT).
- 6. STORE A SCHEMATIC DIAGRAM, A CIRCUIT DIRECTORY, AND A MATERIALS LIST THAT INCLUDES THE MANUFACTURER'S NAME AND PART/CATALOG NUMBERS, ALL LAMINATED IN PLASTIC, IN A METAL POCKET ATTACHED TO THE INSIDE OF THE LOAD CENTER. INSTALL THE POCKET ON THE LOAD CENTER DOOR, PROVIDING DRAIN HOLES TO PREVENT WATER ACCUMULATION.
- 7. SIZE THE DISTRIBUTION PANEL TO ACCOMMODATE THE CIRCUITS SHOWN ON THE LOAD CENTER SUMMARIES AND SPARE CIRCUITS AS DEFINED IN NOTE 1.
- 8. SEPARATE THE MAIN CIRCUIT BREAKER FROM THE DISTRIBUTION PANEL.
- 9. MOUNT PHOTOCELL RECEPTACLE TO 1/2" CONDUIT WITH SILICONE SEALANT. INSTALL A 3C14 CABLE FROM THE LOAD CENTER TO THE TYPE CC CONDUIT BODY WHERE THE SPLICE TO THE PHOTOCELL RECEPTACLE CABLE SHALL BE MADE. IF PLANS CALL TO MOUNT PHOTOCELL AWAY FROM LOAD CENTER USE A 5C14 CABLE FROM LOAD CENTER TO RECEPTACLE.

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
07/11/2012	CENTRAL REGION DETAIL - REPLACES STD. DWG. L-25.00		ALASKA	HHE-0A16(44)/54713	2013	H2	H16

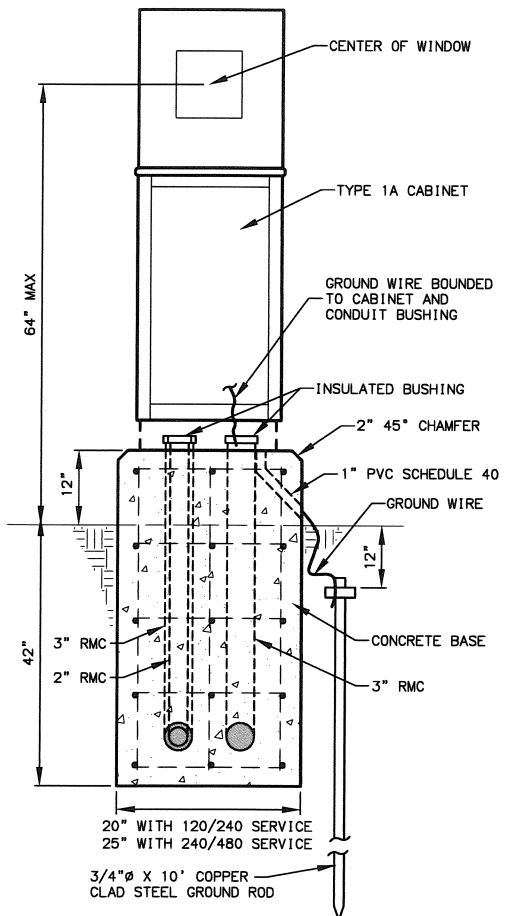


TOP VIEW

PROVIDE "J" ANCHOR BOLTS AS REQUIRED TO MOUNT LOAD CENTER CABINET IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS



RIGHT SIDE
VIEW



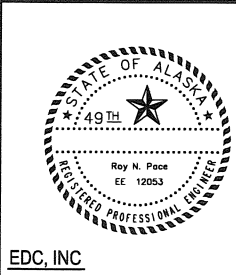
FRONT VIEW

FOUNDATION DETAILS

FOUNDATION NOTES:

- 1. GRADE AWAY FROM THE BASE WITH A MINIMUM SLOPE OF 3%. USE A PRE-MOULDED BITUMINOUS JOINT BETWEEN THE BASE AND CONCRETE SIDEWALK OR PAVING, WHEN ADJACENT TO A SIDEWALK OR PATHWAY.
- 2. PROVIDE ANCHOR BOLTS OR EXPANSION ANCHORS IN THE BASE FOR MOUNTING THE CABINET PER THE MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO EITHER ASTM A307 OR A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
- 3. USE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM 615 AND CLASS "A" CONCRETE CONFORMING TO SECTION 501 OF THE SPECIFICATIONS WHEN CASTING THE BASE.
- 4. IF THE BASE IS PRECAST, INSTALL TWO 3/4" FERRULE LOOP INSERTS IN TWO SIDES OPPOSITE ONE ANOTHER FOR LIFTING.

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ROAD INTERCHANGE SIGNALS

TYPE 1 LOAD CENTER
DETAILS

DESIGNED BY ROR
CHECKED BY TCB
DRAFTED BY TCB

REFS
N/A
N/A

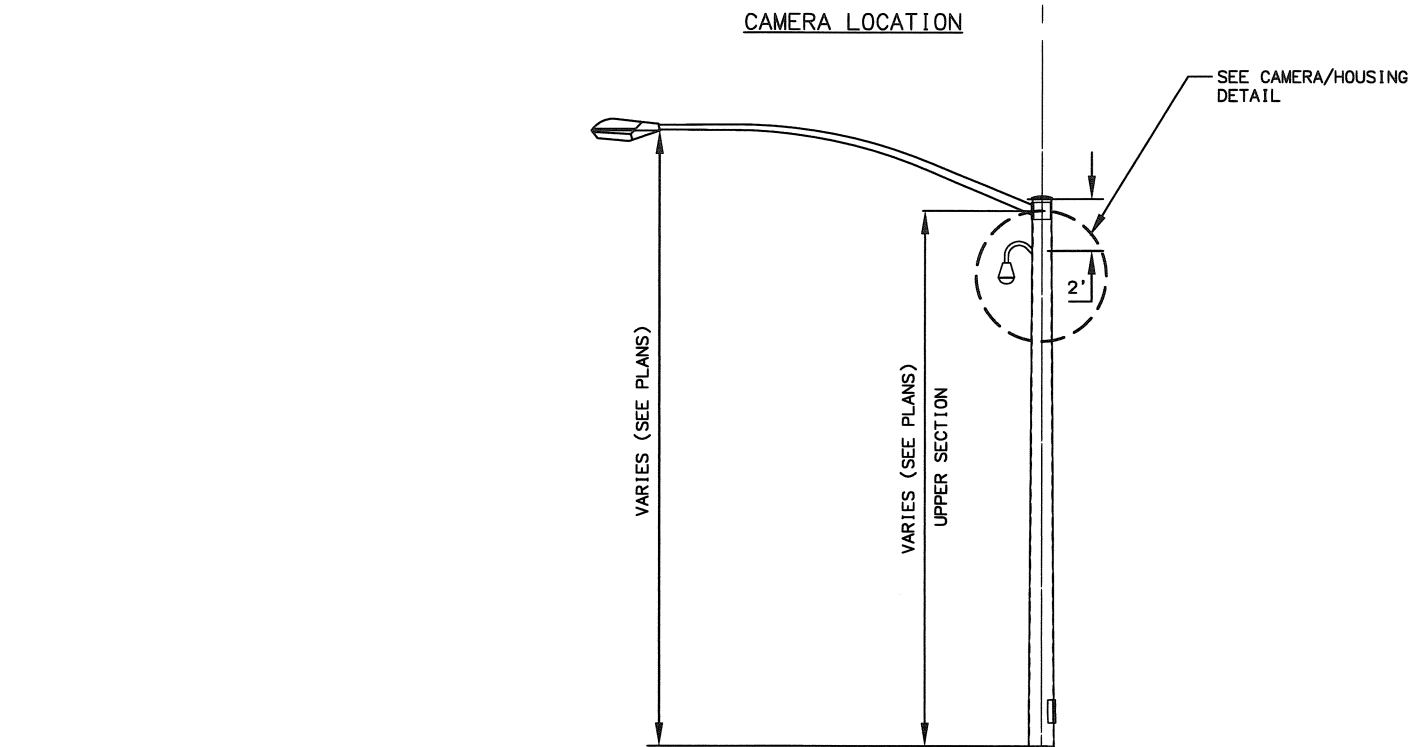
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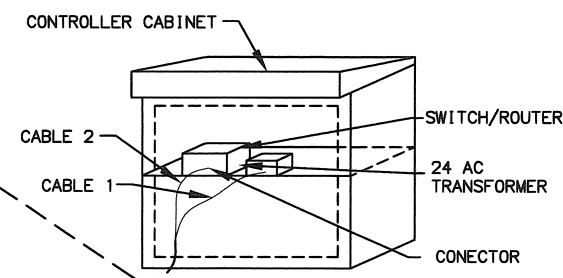
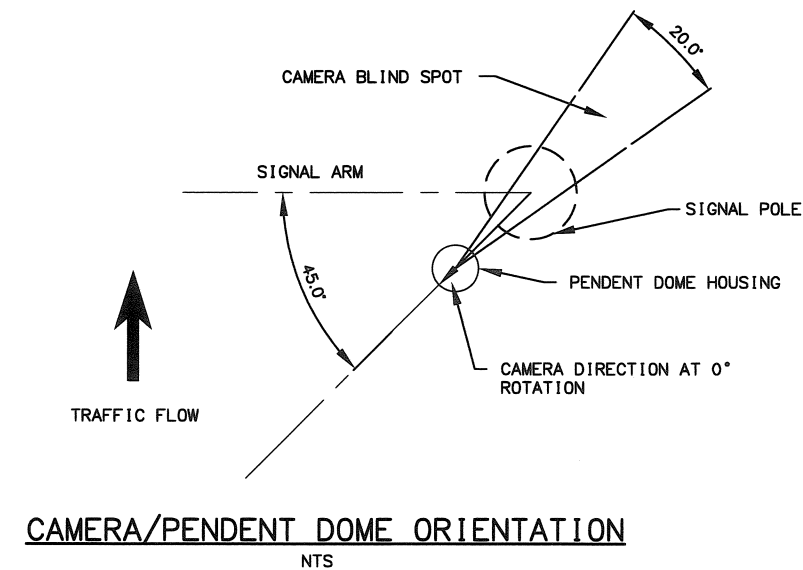
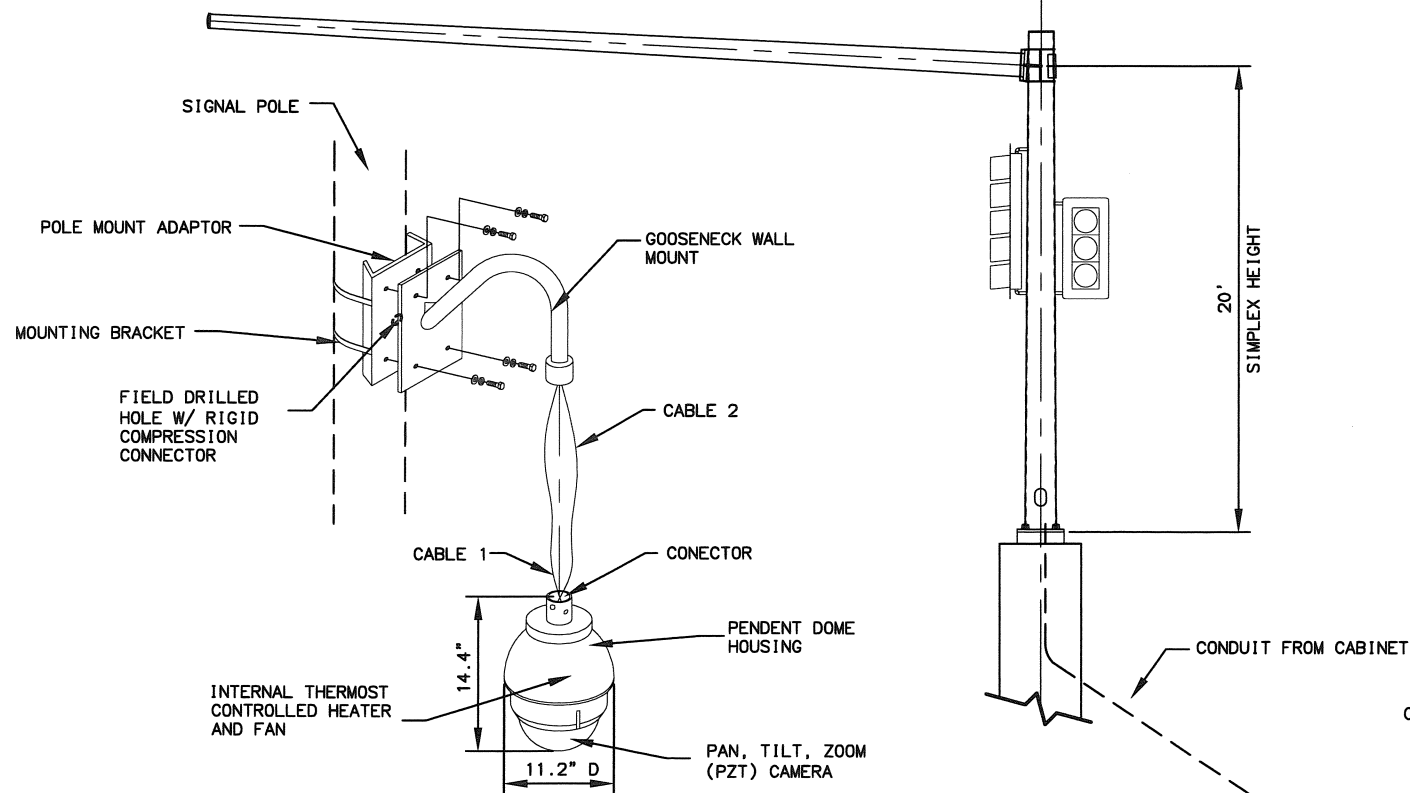
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H4	H16



MATERIAL REQUIREMENTS	
ALL ASSEMBLIES	
MOUNTING BRACKET	PELCO TRITON BRACKET
POLE MOUNT ADAPTOR	SONY UNI-PMA1 OR APPROVED EQUAL
GOOSENECK WALL MOUNT	SONY UNI-WMB1 OR APPROVED EQUAL
CABLE 1	CAT-5E, SHIELDED, DIRECT BURIAL
CABLE 2	3C14 (ACCORDING TO MANUFACTURER'S RECOMMENDATIONS)
CONNECTOR	ENVIRONMENTALLY HARDENED RJ-45
STRAIN RELIEF	REMKE 2201-013 OR APPROVED EQUAL
CAMERA	
CAMERA	SONY NETWORK CAMERA SNC-RZ25N OR APPROVED EQUAL
HOUSING	
PENDANT DOME HOUSING	SONY HOUSING UNI-ORL7T2 OR APPROVED EQUAL

NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES EXCEPT FOR IN LOCATION SHOWN IN SPICE DETAIL WITH SPECIFIED CONNECTOR.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT NO ADDITIONAL COST.
5. THE MIN BEND RADIUS SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET AND THE CAMERA MOUNTING LOCATION.
7. MOUNT THE PENDANT DOME HOUSING AT A 45° ANGLE AT THE REQUIRED HEIGHT. ANGLE AND HEIGHT MAY BE ADJUSTED BY THE ENGINEER TO AVOID WELDS, APPENDICES AND TO APPROVE SITE DISTANCE.
8. ADJUST CAMERA INSIDE THE PENDANT DOME HOUSING AS SHOWN. ENSURE THAT THE CAMERA IS MOUNTED AT A 0° TILT ANGLE.
9. INSTALL WATERTIGHT THREADED RIGID COMPRESSION CONNECTOR WHERE CABLE PASSES THROUGH THE POLE.
10. AT SPLICE LOCATION PROVIDE A SECURE CONNECTION USING CONNECTOR PARTS SPECIFIED. AFTER CONNECTION IS MADE COVER SPLICE WITH HEAT SHRINK. PROVIDE A STRAIN RELIEF CABLE AS NECESSARY.



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ROAD INTERCHANGE SIGNALS

PAN TILT ZOOM CAMERA
MOUNTING DETAILS

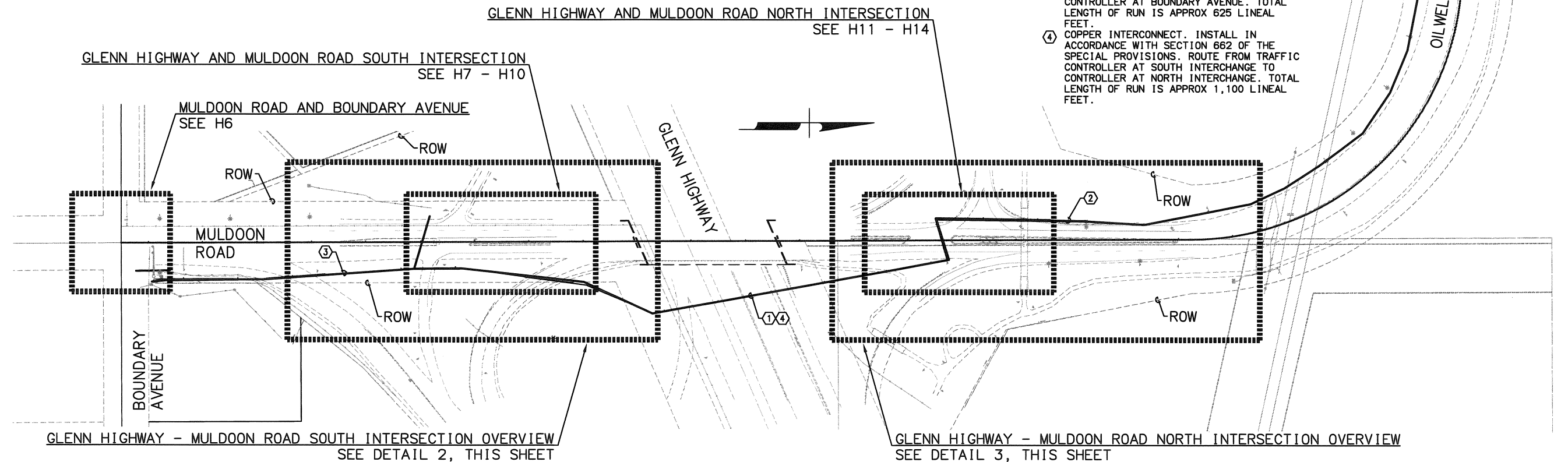
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H5	H16

GENERAL SHEET NOTES:

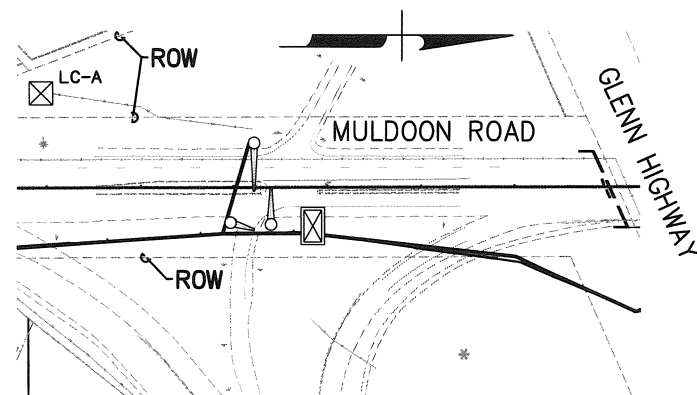
- USE THE FOLLOWING MOA STANDARD DETAILS:
 - 80-5
 - 80-6
 - 80-7
 - 80-27
 - 80-28
 - 80-29
 - 80-52
 - 80-53
 - 80-54
 - 80-55
 - 80-56
 - 80-60
 - 80-61

SHEET NOTES:

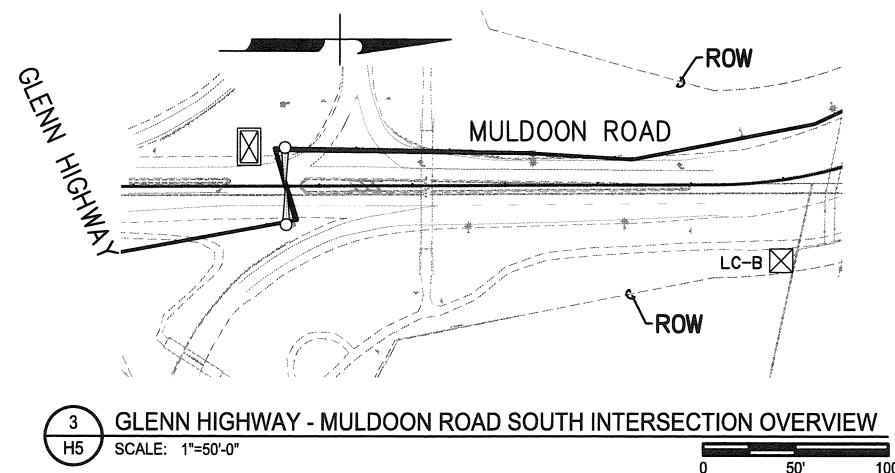
- SEE PLAN AND PROFILE SHEETS FOR DETAILS
- COPPER INTERCONNECT. INSTALL IN ACCORDANCE WITH SECTION 662 OF THE SPECIAL PROVISIONS. ROUTE CONDUIT FROM TRAFFIC CONTROLLER AT NORTH INTERCHANGE TO EXISTING CONDUIT AT STATION 'M' 38+00. PULL COPPER FROM NEW CONTROLLER TO CONTROLLER AT TIKAHNU. TOTAL LENGTH OF RUN IS APPROX 2,000 LINEAL FEET.
- COPPER INTERCONNECT. INSTALL IN ACCORDANCE WITH SECTION 662 OF THE SPECIAL PROVISIONS. ROUTE FROM TRAFFIC CONTROLLER AT SOUTH INTERCHANGE TO CONTROLLER AT BOUNDARY AVENUE. TOTAL LENGTH OF RUN IS APPROX 625 LINEAL FEET.
- COPPER INTERCONNECT. INSTALL IN ACCORDANCE WITH SECTION 662 OF THE SPECIAL PROVISIONS. ROUTE FROM TRAFFIC CONTROLLER AT SOUTH INTERCHANGE TO CONTROLLER AT NORTH INTERCHANGE. TOTAL LENGTH OF RUN IS APPROX 1,100 LINEAL FEET.



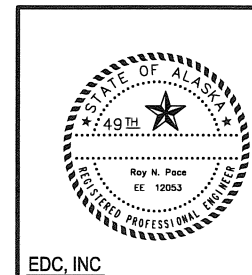
1 GLENN HIGHWAY - MULDOON ROAD INTERCHANGE SITE PLAN
H5 SCALE: 1"=100'-0"



2 GLENN HIGHWAY - MULDOON ROAD SOUTH INTERSECTION OVERVIEW
H5 SCALE: 1"=50'-0"



3 GLENN HIGHWAY - MULDOON ROAD SOUTH INTERSECTION OVERVIEW
H5 SCALE: 1"=50'-0"

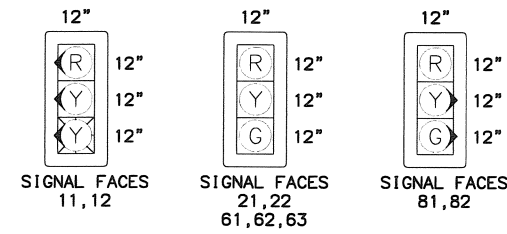


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STATE OF ALASKA
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HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

SITE PLAN



SIGNAL HEAD CONFIGURATIONS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H7	H16

FOUNDATION SCHEDULE			
	STATION ALIGNMENT	OFFSET	STRUCTURE
LC-A	23+36.0	104.0 L	TYPE 1A
TC	26+19.0	27.3 R	
P1	25+97.1	27.6 R	42"Ø X 11' FOUNDATION
P2	25+51.7	36.6 R	42"Ø X 11' FOUNDATION
P3	25+71.9	44.7 L	42"Ø X 11' FOUNDATION

LOOP SCHEDULE		
LOOP	STATION ALIGNMENT	OFFSET
115	26+41.9	2.5 L
213	25+48.9	19.2 R
615	26+41.9	14.3 L
625	26+41.9	27.2 L
814	26+16.6	48.1 L

SHEET NOTES:

- ① SEE PLAN AND PROFILE SHEETS FOR DETAILS

JUNCTION BOX SCHEDULE			
J-BOX	STATION ALIGNMENT	OFFSET	TYPE
0	23+36.0	50.0 L	1A
2	25+49.1	43.8 R	1A
21	25+33.1	35.6 R	1A
3	25+64.7	44.8 L	1A
31	26+11.9	67.5 L	1A
32	27+28.2	268.0 L	1A
41	26+53.7	45.0 L	1A
42	26+89.4	44.7 L	1A
43	28+31.0	44.0 L	1A
44	29+26.0	40.5 L	1A

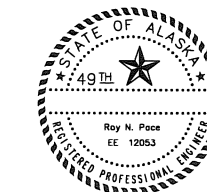
OPTICOM DETECTOR SCHEDULE				
LOCATION	DETECTOR ID	PHASE CALL	FACING DIRECTION	REMARKS
SIGNAL POLE 1 MASTARM	A	2	S	
SIGNAL POLE 3 MASTARM	B	1, 6	N	
SIGNAL POLE 3	C	8	W	

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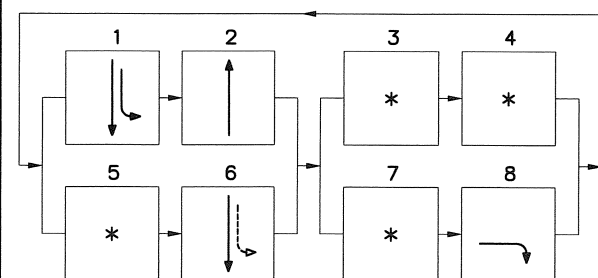
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HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

PLAN - SOUTH INTERSECTION

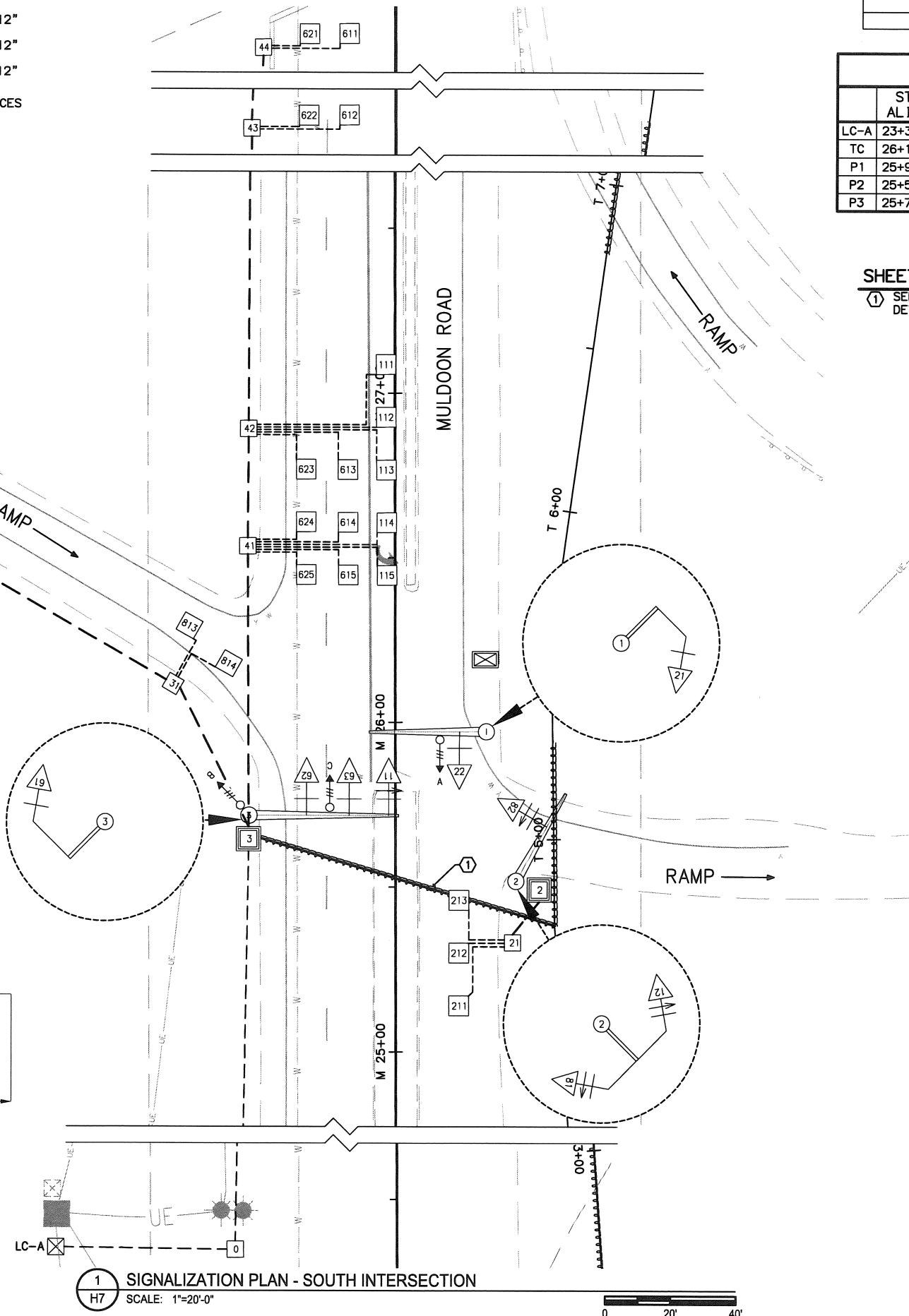


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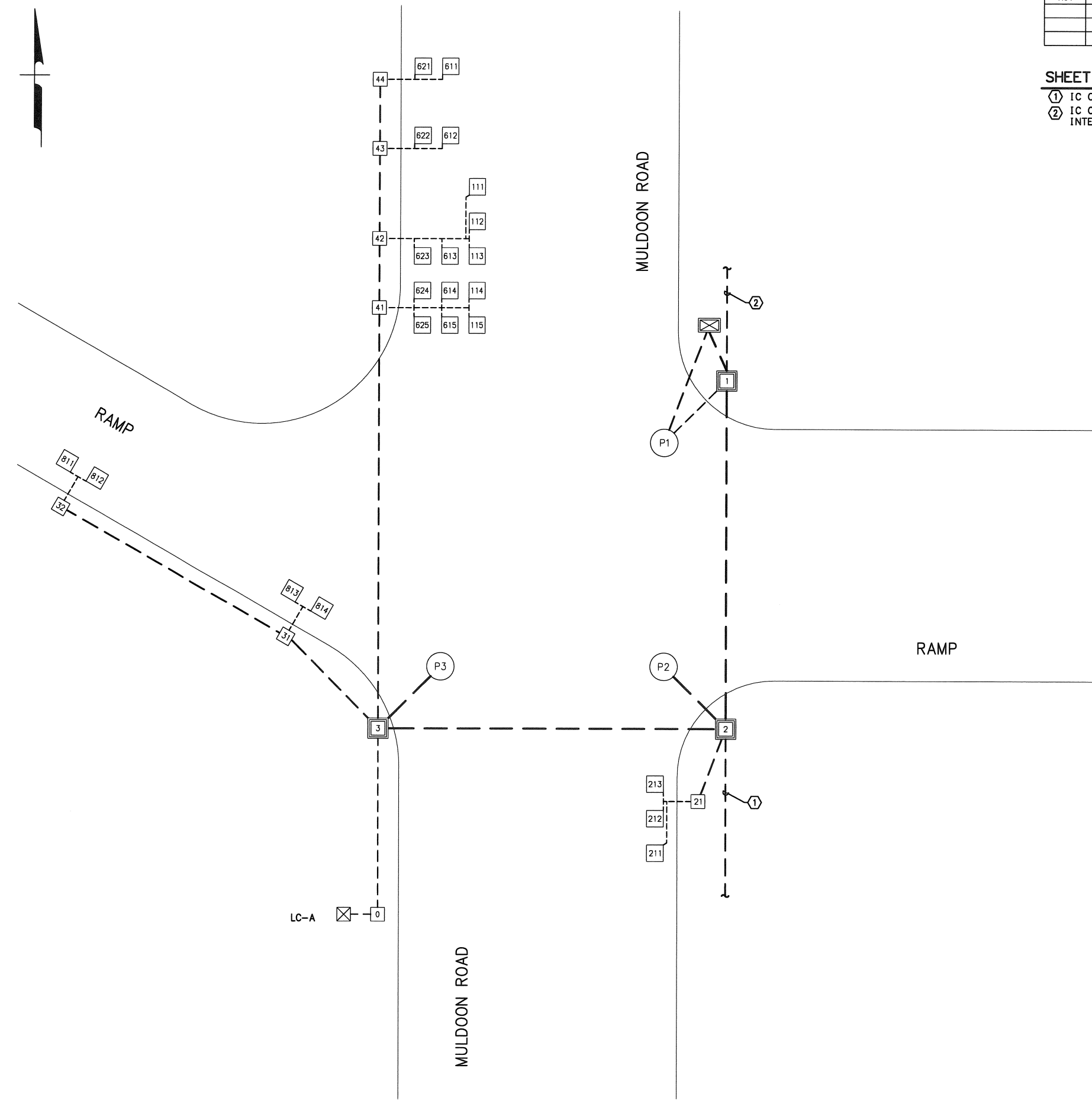


PHASE DIAGRAM

- PEDESTRIAN MOVEMENT
- PROTECTED VEHICLE MOVEMENT
- UNPROTECTED VEHICLE MOVEMENT
- * FUTURE USE/NOT USED



1
H7
SCALE: 1"=20'-0"



REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H8	H16

SHEET NOTES:

① IC CONNECTION TO BOUNDARY INTERSECTION.

② IC CONNECTION TO NORTH GLENN-MULDOON INTERSECTION.

WIRING NOTES				
FROM	TO	CONDUIT	WIRE	
TC	JB1	3 IN	3-7C#14	HEAD 12,81,82
		3 IN	4-7C#14	HEAD 11,61,62,63
			2-3C#20	PRE A,B
			2-3C#14	PRE CON A,B
		3 IN	5-7PR#18	LOOPS 11X,6XX,81X
		2 IN	1-3C#6	SIG
			1-1C#6	GROUND
JB1	P1	3 IN	3-7C#14	HEAD 12,81,82
		2 IN	1-3C#6	INTX L
JB1	JB11	3 IN	1-7PR#18	LOOPS 114,115,614,615,624,625
			1-7PR#18	LOOPS 111,112,113,613,623,631
			1-7PR#18	LOOPS 611,612,621,622
JB11	JB12	2 IN	1-7PR#18	LOOPS 111,112,113,613,623,631
			1-7PR#18	LOOPS 611,612,621,622
JB12	JB13	2 IN	1-7PR#18	LOOPS 611,612,621,622
JB13	JB14	2 IN	1-7PR#18	LOOPS 611,621
JB1	JB2	4 IN	4-7C#14	HEAD 11,61,62,63
			2-3C#20	PRE A,B
			2-3C#14	PRE CON A,B
		4 IN	5-7PR#18	LOOPS 11X,6XX,81X
		2 IN	1-3C#6	SIG
			1-1C#6	GROUND
		4 IN	SPARE	
JB2	P2	3 IN	5-7C#14	HEAD 11,61,62,63
			1-3C#20	PRE A,B
			1-3C#14	PRE CON A,B
		2 IN	2-3C#6	INTX L
JB2	JB21	2 IN	1-7PR#18	LOOPS 814,813
			1-7PR#18	LOOPS 812,811
JB21	JB22	2 IN	1-7PR#18	LOOPS 812,811
JB2	JB31	3 IN	1-7PR#18	LOOPS 114,115,614,615,624,625
			1-7PR#18	LOOPS 111,112,113,613,623,631
			1-7PR#18	LOOPS 611,612,621,622
JB31	JB32	2 IN	1-7PR#18	LOOPS 111,112,113,613,623,631
			1-7PR#18	LOOPS 611,612,621,622
JB32	JB33	2 IN	1-7PR#18	LOOPS 611,612,621,622
JB33	JB34	2 IN	1-7PR#18	LOOPS 611,621

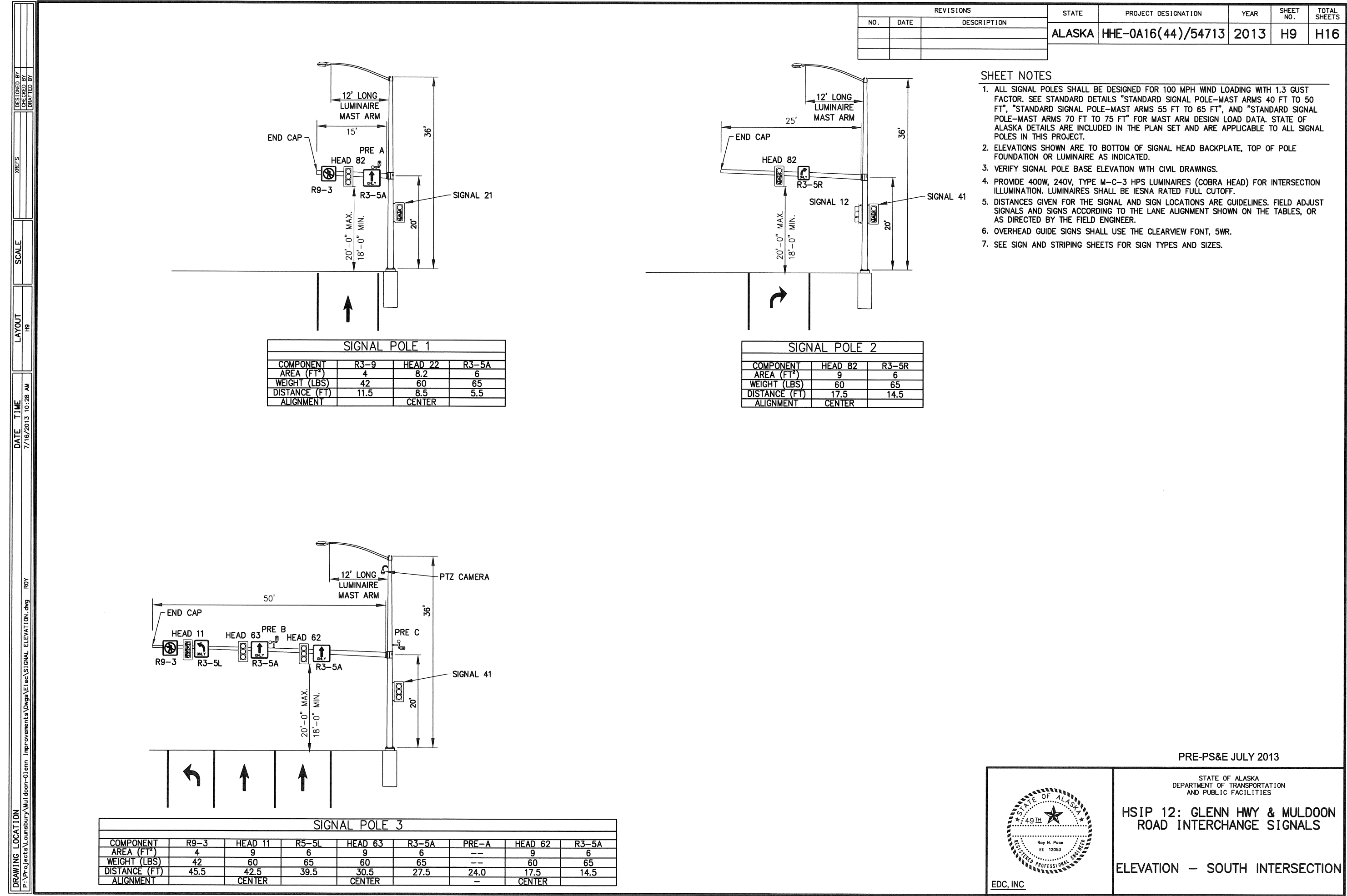
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

WIRING – SOUTH INTERSECTION



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DATE
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CONTROLLER CABINET FEATURES	
GENERAL OPTIONS	
TYPE	TS2-1
SIZE	NEMA SIZE 6
MATERIALS	0.125" NATURAL ALUMINUM
MODEL	ECONOLITE TS2 TYPE 1 PLUG-N-GO
EXTENDER BASE	NONE
MOUNTING HARDWARE	INCLUDED
PAINT	NONE
SPECIAL OPTIONS	
LIFTING TABS	INCLUDED
COMPUTER SHELF	FULL WIDTH, 12"
AIR FILTER	FIBER MESH
MAIN DOOR LOCK	BEST
REAR DOOR	NONE
FLUORESCENT LAMP	24"
GOOSENECK LAMP	MOUNTED ON DOOR, INTEGRAL SWITCH
MAIN PANEL	
MAIN PANEL POSITION	16-POSITION HORIZONTAL
RESISTOR LOCATION	SIDEWALL
FLASH TRANSFER RELAYS SOCKETS	6 INCLUDED
FLASHER SOCKETS	2 INCLUDED
K1 RELAY SOCKET	INCLUDED
POWER PANEL	
SURGE SUPPRESSION	ACP-340
LINE FILTER (RADIO INTERFERENCE)	50A
MERCURY CONTACTOR	NORMALLY OPEN
MAIN CIRCUIT BREAKER	40A
AUXILIARY CIRCUIT BREAKER	20A
GFI LOCATION	POWER PANEL
2 POSITION TERMINAL BLOCK FOR INCOMING POWER, #4-#6 U.S.G	INCLUDED
10 POSITION NEUTRAL BUS BAR	INCLUDED
6 POSITION CHASSIS GROUND BUS BAR	INCLUDED
EATON MODEL HS-P-SP-120-60-RJ SURGE PROTECTOR	2 INCLUDED
POLICE PANEL	
POLICE PANEL	INCLUDED
POLICE PANEL SWITCHES	SIGNALS ON/OFF, AUTO/FLASH
POLICE PANEL PUSHBUTTON ALARM	INCLUDED
POLICE DOOR LOCK	BEST
POLICE PANEL MANUAL CORD	NONE
AUXILIARY PANEL	
AUXILIARY PANEL SWITCHES	AUTO/FLASH, STOP TIME, CONTROLLER POWER, COORD/FREE, F01, F02
DETECTOR TEST SWITCHES	TACTILE PUSHBUTTON
RACK DETECTION	
DETECTOR RACKS	PROVIDE TWO (2) 16-CHANNEL DETECTOR RACKS WITH 2 SLOTS EACH FOR OPTICOM. NOTE: ECONOLITE CONFIGURATION #4 WITH ADDITIONAL DETECTOR RACK.
DETECTOR RACK POWER SUPPLY	BIU FOR EACH RACK
EVP REQUIREMENTS	WIRING FOR 3M OPTICOM RACK W/GREENS EACH DETECTOR RACK
DETECTOR LOOP INTERFACE	PROVIDE WITH DUAL 12 POS. TERM BLOCKS
ADDITIONAL OPTIONS	
MASTER CABINET	ON
WIRE CABINET FOR UPS	ON
RAILROAD PREEMPTION	TWO CHANNELS OF RAILROAD PREEMPTION INCLUDED
RAILROAD PREEMPTION/STAND ALONE PANEL	INCLUDED
RED JUMPERS FOR ALL UNUSED PHASES	INCLUDED
LOAD RESISTORS	8 INCLUDED
RJ-11 TELEPHONE JACK	INCLUDED
ADDITIONAL GFI OUTLET (NON-FILTERED)	INCLUDED
DOUBLE DUPLEX CONVENIENCE OUTLET	INCLUDED
ADDITIONAL NEUTRAL BUS BARS (15 POSITIONS)	RIGHT AND LEFT SIDE OF CABINET
ADDITIONAL CHASSIS GROUND BUS BAR (15 POSITIONS)	RIGHT AND LEFT SIDE OF CABINET
STANDARD WIREING DIAGRAM (AUTOCAD FORMAT)	PROVIDE ON COMPACT DISC
48-HOURS FACTORY BURN-IN	INCLUDED
CONTINUOUS WELD	INCLUDED

CONTROLLER ASSEMBLY EQUIPMENT	
SUPPLY ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE A FULLY FUNCTIONING TRAFFIC SIGNAL CONTROLLER ASSEMBLY COMPLIANT WITH THE NEMA STANDARD PUBLICATION NO. TS2-2003 V02.06 AND SPECIAL "SPECIALS" PROVISIONS OF THIS CONTRACT INCLUDING BUT NOT LIMITED TO;	
QTY	CONTROLLER/MMU EQUIPMENT
1	ECONOLITE ASC/3-2100 OR APPROVED EQUAL CONTROLLER
1	CONTROLLER TELEMETRY MODULE TCM-FSK-9
1	CONTROLLER ETHERNET PORT
1	CONTROLLER DATA KEY
2	ECONOLITE 1600LEIP SMART MMU OR APPROVED EQUAL
2	MMU ETHERNET PORT
2	MMU CARD
CABINET EQUIPMENT	
16	RENO LS-200 LOAD SWITCHES
18	RENO GT-200-SS 2-CHANNEL DETECTOR AMPLIFIERS
6	RENO TR-200 FLASH TRANSFER RELAYS
6	ECONOLITE BIU-64 TERMINAL AND FACILITIES BIU'S
6	ECONOLITE BIU-64 DETECTION BIU'S
1	ECONOLITE PS-2412 TS2 CABINET POWER SUPPLY
2	ECONOLITE 801 FLASHER
1	K1 RELAY
1	750/1500W SELECTABLE THERMOSTATICALLY CONTROLLED CABINET HEATER
1	RESEALABLE PRINT POUCH OF SUFFICIENT SIZE TO ACCOMMODATE CABINET PRINTS
0	COMPLETE SET OF MANUAL FOR CONTROLLER, MMU AND VEHICLE DETECTOR AMPLIFIERS

COMMUNICATION EQUIPMENT SCHEDULE	
QTY	RADIO INTERCONNECT SYSTEM
0	MDS MODEL 4790A 330-512MHZ LICENSED MASTER RADIO (NON-PROTECTED)
0	MDS MODEL 4710A 330-512MHZ LICENSED TRANCEIVER
0	ANTENEX 450-470MHZ 10.2DB N(F) YAGI ANTENNA
0	ANDREW LDF4-50 COAXIAL CABLE HELIAX .63 OD (UNIT LINEAR FEET)
0	MDS 01-3682A01 AC ADAPTER 12V-30W 110/220VAC
0	ANDREW CONNECTOR, LDF4-50 N(M)
0	ANDREW CONNECTOR, LDF4-50 N(F)
0	POLYPHASER LIGHTING PROTECTOR,FLANGED N(F)-N(F)
ON-STREET MASTER CONTROLLER	
0	MASTER CONTROLLER, ECONOLITE ASC/2M-1000
0	56K INDUSTRIAL MODEM & PHONE DROP (INCLUDES TELCO ACTIVATION)
0	ECONOLITE GPS-100 GPS TIME REFERENCE OR APPROVED EQUAL
UNINTERRUPTIBLE POWER SUPPLY	
0	ECONOLITE CUSTOM CABINET FOR UPS, MOUNT TC CABINET
0	ECONOLITE DBL 2100 OR APPROVED EQUAL
0	ECONOLITE HOT SWAP BYPASS SWITCH OR APPROVED EQUAL
0	ECONOLITE FAIL-SAFE BYPASS SWITCH OR APPROVED EQUAL
OTHER EQUIPMENT	
0	ATSI PCMT-2600 MMU TESTER W/MMU & CMU CABLES
0	FULLY FUNCTIONING TRAFFIC SIGNAL CONTROLLER, MASTER CONTROLLER AND CABINET
0	INDUCTIVE LOOP TEST KITS
0	LOOP FINDERS
0	BIU TESTERS
0	FRAME GRABBER
0	MULTI-SWITCH TESTER
0	BIU SLOT TESTER
0	CARD RACK SLOT TESTER
0	DETECTOR TESTER
0	MCCAIN CID II
0	RADIO SITE SURVEY LOCATIONS
0	INTX DIAGRAM LOCATIONS

QTY	EVP EQUIPMENT SCHEDULE
0	OPTICOM MODEL 760E CARD RACK
1	OPTICOM MODEL 754 PHASE SELECTOR
4	OPTICOM MODEL 721 RECEIVERS
0	OPTICOM MODEL 792H EMITTERS W/792 SWITCH



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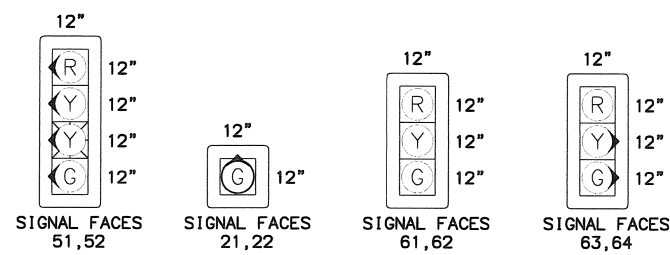
PRE-PS&E JULY 2013

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

TRAFFIC EQUIP – SOUTH
INTERSECTION

DESIGNED BY: XREFS
CHECKED BY: SCALE
LAYOUT: H11
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ROY



SIGNAL HEAD CONFIGURATIONS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H11	H16

FOUNDATION SCHEDULE			
	STATION ALIGNMENT	OFFSET	STRUCTURE
LC-B	40+33.0	82.0 R	TYPE 1A
TC	35+13.2	38.0 L	
P1	35+25.6	35.2 R	42"Ø X 11' FOUNDATION
P2	35+26.0	40.6 L	42"Ø X 11' FOUNDATION

LOOP SCHEDULE		
LOOP	STATION ALIGNMENT	OFFSET
515	34+50.9	2.1 R
615	36+58.8	11.7 L
625	37+05.1	24.3 L

SHEET NOTES:
① SEE PLAN AND PROFILE SHEETS FOR DETAILS

JUNCTION BOX SCHEDULE			
J-BOX	STATION ALIGNMENT	OFFSET	TYPE
0	40+33.0	37.0 R	1A
0A	40+33.0	43.6 L	1A
0B	38+43.4	35.0 L	1A
1	35+15.7	35.5 R	3
11	34+36.8	37.8 R	1A
12	33+92.2	39.9 R	1A
2	35+31.4	42.8 L	3
31	36+82.9	41.4 L	1A
32	38+34.5	31.5 L	1A
33	39+30.3	34.7 L	1A

OPTICOM DETECTOR SCHEDULE				
LOCATION	DETECTOR ID	PHASE CALL	FACING DIRECTION	REMARKS
SIGNAL POLE 1 MASTARM	A	5	S	
SIGNAL POLE 2 MASTARM	B	6	N	

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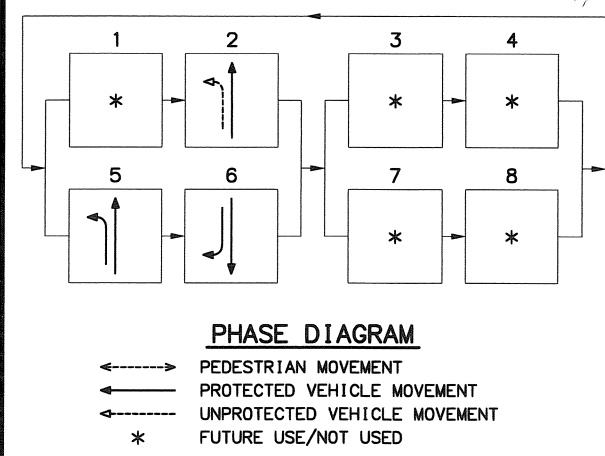
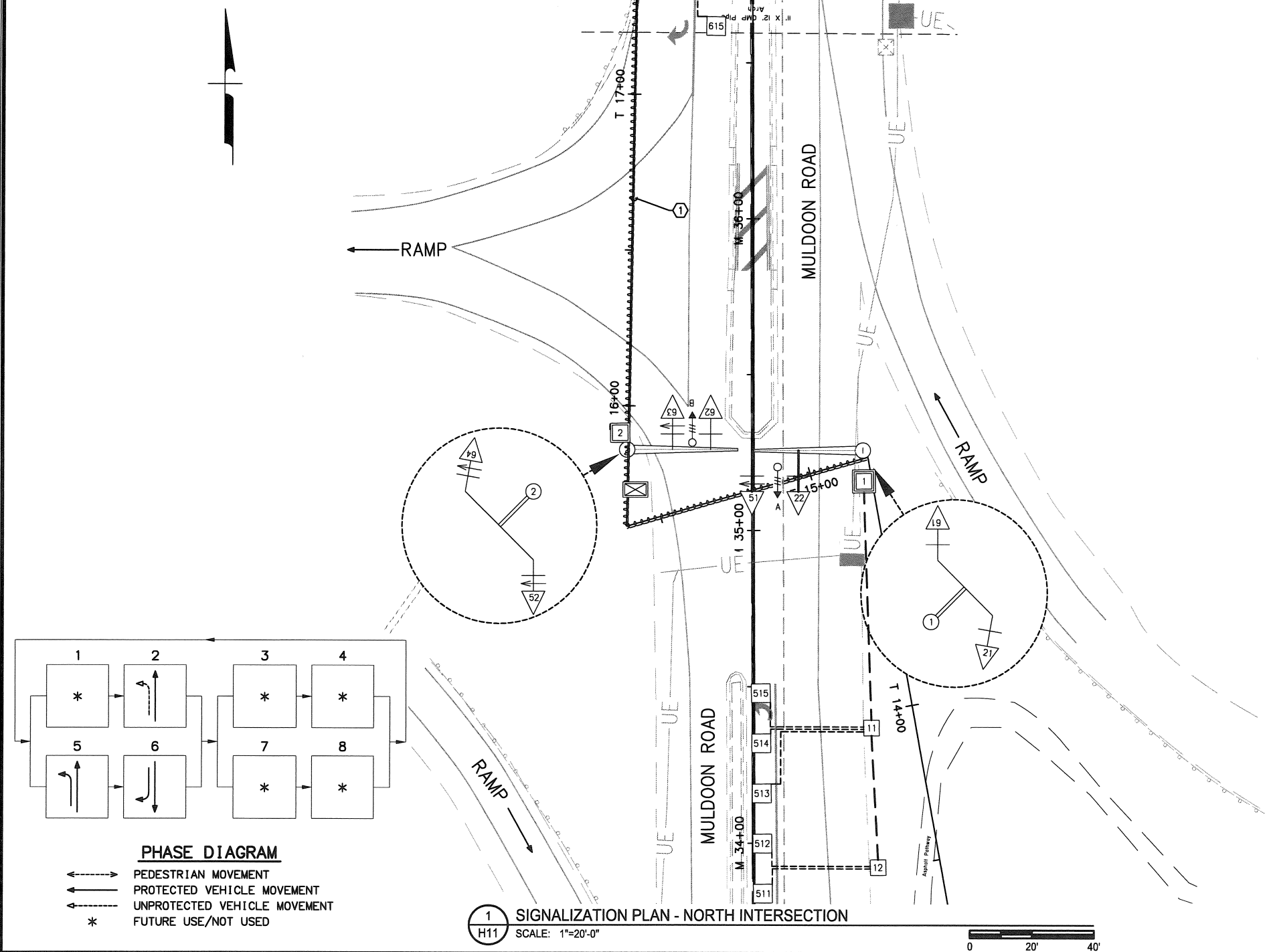


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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

PLAN - NORTH INTERSECTION



1
H11 SIGNALIZATION PLAN - NORTH INTERSECTION
SCALE: 1"=20'-0"

DRAWING LOCATION
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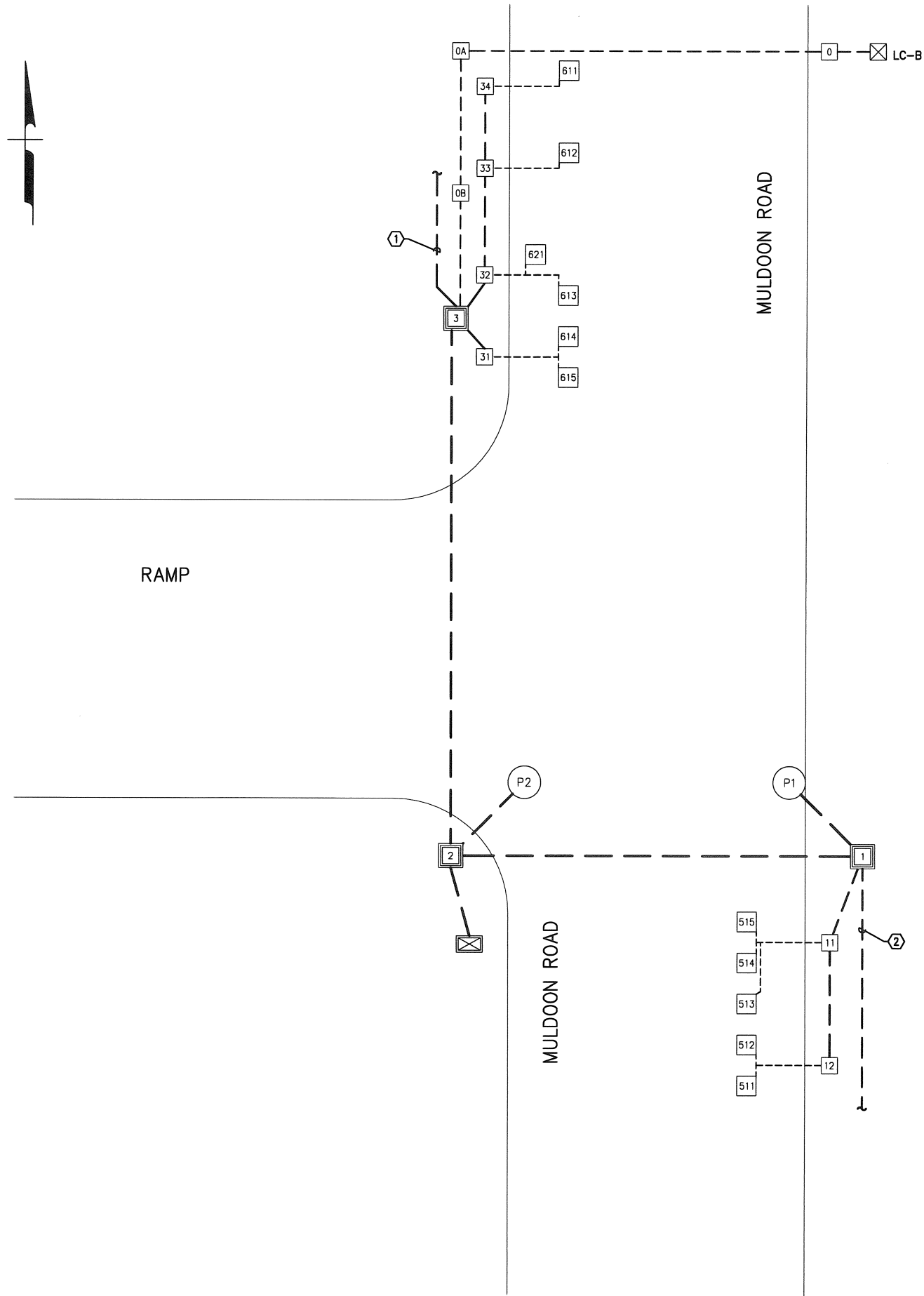
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DESIGNED BY
CHECKED BY
DATE



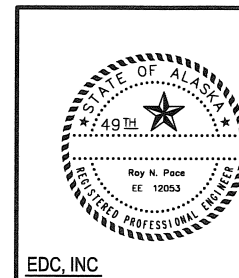
REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HHE-0A16(44)/54713	2013	H12	H16

- SHEET NOTES:**
- 1 IC CONNECTION TO TIKAHNU INTERSECTION.
 - 2 IC CONNECTION TO SOUTH GLENN-MULDOON INTERSECTION.

WIRING NOTES				
FROM	TO	CONDUIT	WIRE	
LC-A	JB0	2 IN	1-3C#6 1-1C#6 1-3C#8	SIG GROUND INTX L
JB0	TC	2 IN	1-3C#6 1-1C#6 1-3C#8	SIG GROUND INTX L
TC	JB1	4 IN	4-7c#14 1-3c#20 1-3c#14 3-7PR#18 2 IN 1-3c#8	HEAD 21,22,51,61 PRE A PRE CON A LOOPS INTX L
TC	JB2	3 IN	4-7c#14 1-3c#20 1-3c#14 1-7PR#18 2 IN 2-3c#8	HEAD 52,62,63,64 PRE A PRE CON A LOOPS INTX L
JB1	P1	4 IN	4-7c#14 1-3c#20 1-3c#14 1-3c#8	HEAD 21,22,51,61 PRE A PRE CON A INTX L
JB1	JB11	2 IN	1-7PR#18 1-7PR#18	LOOPS 513,514,515 LOOPS 511,512
JB11	JB12	2 IN	1-7PR#18	LOOPS 511,512
JB2	P2	3 IN	5-7c#14 1-3c#20 1-3c#14 2-3c#8	HEAD 21,22,23,32,51 PRE B PRE CON B INTX L
JB2	JB31	2 IN	1-7PR#18 1-7PR#18	LOOPS 613,614,615,621 LOOPS 612,611
JB31	JB32	2 IN	1-7PR#18	LOOPS 612,611
JB32	JB33	2 IN	1-7PR#18	LOOPS 611

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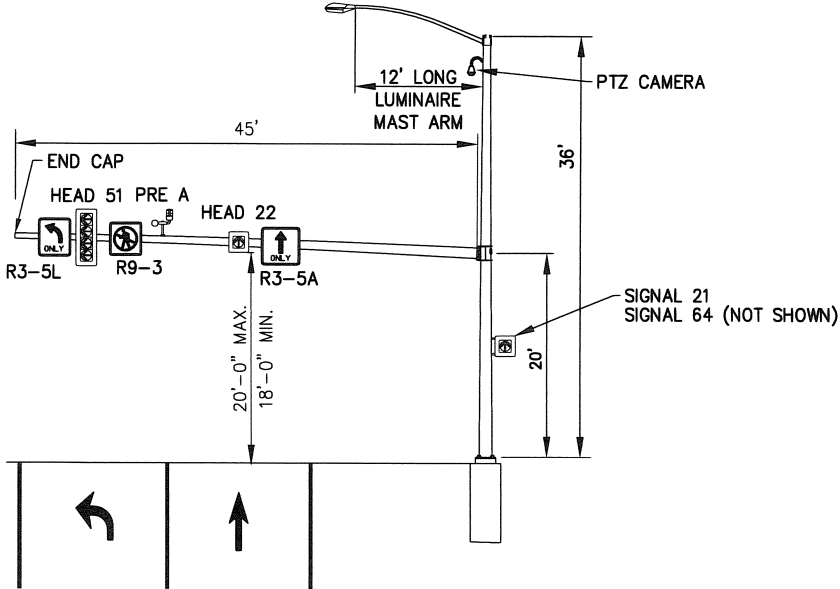
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS**

WIRING – NORTH INTERSECTION

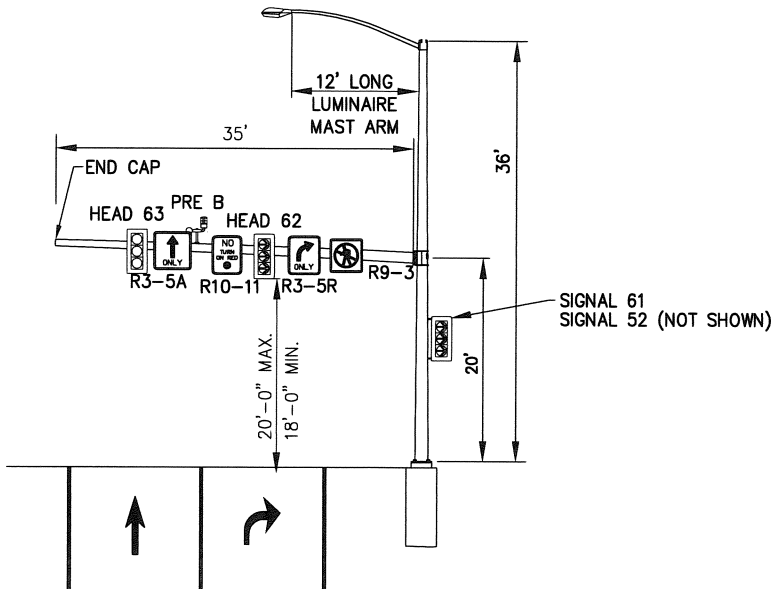
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H13	H16

SHEET NOTES

- ALL SIGNAL POLES SHALL BE DESIGNED FOR 100 MPH WIND LOADING WITH 1.3 GUST FACTOR. SEE STANDARD DETAILS "STANDARD SIGNAL POLE--MAST ARMS 40 FT TO 50 FT", "STANDARD SIGNAL POLE--MAST ARMS 55 FT TO 65 FT", AND "STANDARD SIGNAL POLE--MAST ARMS 70 FT TO 75 FT" FOR MAST ARM DESIGN LOAD DATA. STATE OF ALASKA DETAILS ARE INCLUDED IN THE PLAN SET AND ARE APPLICABLE TO ALL SIGNAL POLES IN THIS PROJECT.
- ELEVATIONS SHOWN ARE TO BOTTOM OF SIGNAL HEAD BACKPLATE, TOP OF POLE FOUNDATION OR LUMINAIRE AS INDICATED.
- VERIFY SIGNAL POLE BASE ELEVATION WITH CIVIL DRAWINGS.
- PROVIDE 400W, 240V, TYPE M-C-3 HPS LUMINAIRES (COBRA HEAD) FOR INTERSECTION ILLUMINATION. LUMINAIRES SHALL BE IESNA RATED FULL CUTOFF.
- DISTANCES GIVEN FOR THE SIGNAL AND SIGN LOCATIONS ARE GUIDELINES. FIELD ADJUST SIGNALS AND SIGNS ACCORDING TO THE LANE ALIGNMENT SHOWN ON THE TABLES, OR AS DIRECTED BY THE FIELD ENGINEER.
- OVERHEAD GUIDE SIGNS SHALL USE THE CLEARVIEW FONT, 5WR.
- SEE SIGN AND STRIPING SHEETS FOR SIGN TYPES AND SIZES.



SIGNAL POLE 1						
COMPONENT	R3-5L	HEAD 51	R9-3	PRE-A	HEAD 22	R3-5A
AREA (FT²)	6	12	4	--	3	6
WEIGHT (LBS)	65	80	42	--	20	65
DISTANCE (FT)	41.1	38.1	35.1	30.7	23.2	20.2
ALIGNMENT	--	CENTER	--	--	CENTER	--



SIGNAL POLE 2							
COMPONENT	HEAD 63	R3-5A	PRE-A	R10-11	HEAD 62	R3-5R	R9-3
AREA (FT²)	9	6	--	8	9	6	4
WEIGHT (LBS)	60	65	--	80	60	65	42
DISTANCE (FT)	27.0	24.0	20.8	17.6	14.6	11.6	7.6
ALIGNMENT	CENTER	--	--	--	CENTER	--	--

PRE-PS&E JULY 2013

EDC, INC

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

ELEVATION -- NORTH INTERSECTION

DESIGNED BY
CHECKED BY
DATE FEB 91

REVISED

SCALE

LAYOUT
H14

DATE TIME
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DRAWING LOCATION
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CONTROLLER CABINET FEATURES	
GENERAL OPTIONS	
TYPE	TS2-1
SIZE	NEMA SIZE 6
MATERIALS	0.125" NATURAL ALUMINUM
MODEL	ECONOLITE TS2 TYPE 1 PLUG-N-GO
EXTENDER BASE	NONE
MOUNTING HARDWARE	INCLUDED
PAINT	NONE
SPECIAL OPTIONS	
LIFTING TABS	INCLUDED
COMPUTER SHELF	FULL WIDTH, 12"
AIR FILTER	FIBER MESH
MAIN DOOR LOCK	BEST
REAR DOOR	NONE
FLUORESCENT LAMP	24"
GOOSENECK LAMP	MOUNTED ON DOOR, INTEGRAL SWITCH
MAIN PANEL	
MAIN PANEL POSITION	16-POSITION HORIZONTAL
RESISTOR LOCATION	SIDEWALL
FLASH TRANSFER RELAYS SOCKETS	6 INCLUDED
FLASHER SOCKETS	2 INCLUDED
K1 RELAY SOCKET	INCLUDED
POWER PANEL	
SURGE SUPPRESSION	ACP-340
LINE FILTER (RADIO INTERFERENCE)	50A
MERCURY CONTACTOR	NORMALLY OPEN
MAIN CIRCUIT BREAKER	40A
AUXILIARY CIRCUIT BREAKER	20A
GFI LOCATION	POWER PANEL
2 POSITION TERMINAL BLOCK FOR INCOMING POWER, #4-#6 U.S.G	INCLUDED
10 POSITION NEUTRAL BUS BAR	INCLUDED
6 POSITION CHASSIS GROUND BUS BAR	INCLUDED
EATON MODEL HS-P-SP-120-60-RJ SURGE PROTECTOR	2 INCLUDED
POLICE PANEL	
POLICE PANEL	INCLUDED
POLICE PANEL SWITCHES	SIGNALS ON/OFF, AUTO/FLASH
POLICE PANEL PUSHBUTTON ALARM	INCLUDED
POLICE DOOR LOCK	BEST
POLICE PANEL MANUAL CORD	NONE
AUXILIARY PANEL	
AUXILIARY PANEL SWITCHES	AUTO/FLASH, STOP TIME, CONTROLLER POWER, COORD/FREE, F01, F02
DETECTOR TEST SWITCHES	TACTILE PUSHBUTTON
RACK DETECTION	
DETECTOR RACKS	PROVIDE TWO (2) 16-CHANNEL DETECTOR RACKS WITH 2 SLOTS EACH FOR OPTICOM. NOTE: ECONOLITE CONFIGURATION #4 WITH ADDITIONAL DETECTOR RACK.
DETECTOR RACK POWER SUPPLY	BIU FOR EACH RACK
EVP REQUIREMENTS	WIRING FOR 3M OPTICOM RACK W/GREENS EACH DETECTOR RACK
DETECTOR LOOP INTERFACE	PROVIDE WITH DUAL 12 POS. TERM BLOCKS
ADDITIONAL OPTIONS	
MASTER CABINET	ON
WIRE CABINET FOR UPS	ON
RAILROAD PREEMPTION	TWO CHANNELS OF RAILROAD PREEMPTION INCLUDED
RAILROAD PREEMPTION/STAND ALONE PANEL	INCLUDED
RED JUMPERS FOR ALL UNUSED PHASES	INCLUDED
LOAD RESISTORS	8 INCLUDED
RJ-11 TELEPHONE JACK	INCLUDED
ADDITIONAL GFI OUTLET (NON-FILTERED)	INCLUDED
DOUBLE DUPLEX CONVENIENCE OUTLET	INCLUDED
ADDITIONAL NEUTRAL BUS BARS (15 POSITIONS)	RIGHT AND LEFT SIDE OF CABINET
ADDITIONAL CHASSIS GROUND BUS BAR (15 POSITIONS)	RIGHT AND LEFT SIDE OF CABINET
STANDARD WIRING DIAGRAM (AUTOCAD FORMAT)	PROVIDE ON COMPACT DISC
48-HOURS FACTORY BURN-IN	INCLUDED
CONTINUOUS WELD	INCLUDED

CONTROLLER ASSEMBLY EQUIPMENT	
SUPPLY ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE A FULLY FUNCTIONING TRAFFIC SIGNAL CONTROLLER ASSEMBLY COMPLIANT WITH THE NEMA STANDARD PUBLICATION NO. TS2-2003 V02.06 AND SPECIAL "SPECIALS" PROVISIONS OF THIS CONTRACT INCLUDING BUT NOT LIMITED TO;	
QTY	CONTROLLER/MMU EQUIPMENT
1	ECONOLITE ASC/3-2100 OR APPROVED EQUAL CONTROLLER
1	CONTROLLER TELEMETRY MODULE TCM-FSK-9
1	CONTROLLER ETHERNET PORT
1	CONTROLLER DATA KEY
2	ECONOLITE 1600LEIP SMART MMU OR APPROVED EQUAL
2	MMU ETHERNET PORT
2	MMU CARD
CABINET EQUIPMENT	
16	RENO LS-200 LOAD SWITCHES
18	RENO GT-200-SS 2-CHANNEL DETECTOR AMPLIFIERS
6	RENO TR-200 FLASH TRANSFER RELAYS
6	ECONOLITE BIU-64 TERMINAL AND FACILITIES BIU'S
6	ECONOLITE BIU-64 DETECTION BIU'S
1	ECONOLITE PS-2412 TS2 CABINET POWER SUPPLY
2	ECONOLITE 801 FLASHER
1	K1 RELAY
1	750/1500W SELECTABLE THERMOSTATICALLY CONTROLLED CABINET HEATER
1	RESEALABLE PRINT POUCH OF SUFFICIENT SIZE TO ACCOMMODATE CABINET PRINTS
0	COMPLETE SET OF MANUAL FOR CONTROLLER, MMU AND VEHICLE DETECTOR AMPLIFIERS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H14	H16

COMMUNICATION EQUIPMENT SCHEDULE	
QTY	RADIO INTERCONNECT SYSTEM
0	MDS MODEL 4790A 330-512MHZ LICENSED MASTER RADIO (NON-PROTECTED)
0	MDS MODEL 4710A 330-512MHZ LICENSED TRANCEIVER
0	ANTENEX 450-470MHZ 10.2DB N(F) YAGI ANTENNA
0	ANDREW LDF4-50 COAXIAL CABLE HELIAX .63 OD (UNIT LINEAR FEET)
0	MDS 01-3682A01 AC ADAPTER 12V-30W 110/220VAC
0	ANDREW CONNECTOR, LDF4-50 N(M)
0	ANDREW CONNECTOR, LDF4-50 N(F)
0	POLYPHASER LIGHTING PROTECTOR,FLANGED N(F)-N(F)
ON-STREET MASTER CONTROLLER	
0	MASTER CONTROLLER, ECONOLITE ASC/2M-1000
0	56K INDUSTRIAL MODEM & PHONE DROP (INCLUDES TELCO ACTIVATION)
0	ECONOLITE GPS-100 GPS TIME REFERENCE OR APPROVED EQUAL
UNINTERRUPTIBLE POWER SUPPLY	
0	ECONOLITE CUSTOM CABINET FOR UPS, MOUNT TC CABINET
0	ECONOLITE DBL 2100 OR APPROVED EQUAL
0	ECONOLITE HOT SWAP BYPASS SWITCH OR APPROVED EQUAL
0	ECONOLITE FAIL-SAFE BYPASS SWITCH OR APPROVED EQUAL
OTHER EQUIPMENT	
0	ATSI PCMT-2600 MMU TESTER W/MMU & CMU CABLES
0	FULLY FUNCTIONING TRAFFIC SIGNAL CONTROLLER, MASTER CONTROLLER AND CABINET
0	INDUCTIVE LOOP TEST KITS
0	LOOP FINDERS
0	BIU TESTERS
0	FRAME GRABBER
0	MULTI-SWITCH TESTER
0	BIU SLOT TESTER
0	CARD RACK SLOT TESTER
0	DETECTOR TESTER
0	MCCAIN CID II
0	RADIO SITE SURVEY LOCATIONS
0	INTX DIAGRAM LOCATIONS

QTY	EVP EQUIPMENT SCHEDULE
0	OPTICOM MODEL 760E CARD RACK
1	OPTICOM MODEL 754 PHASE SELECTOR
5	OPTICOM MODEL 721 RECEIVERS
0	OPTICOM MODEL 792H EMITTERS W/792 SWITCH

PRE-PS&E JULY 2013



EDC, INC

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

TRAFFIC EQUIP – NORTH
INTERSECTION

DESIGNED BY
CHECKED BY
DATE ISSUED

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SCALE

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DATE TIME
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DRAWING LOCATION

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	HHE-0A16(44)/54713	2013	H15	H16

LOAD CENTER "A" SUMMARY: TYPE 1A INSTALLATION										
LOAD CENTER LOCATION:						SERVICE: ML&P				
SERVICE: SINGLE PHASE, 3 WIRE, 120/240V W/GND NEUTRAL						METER SOCKET: Y				
LOAD	MAIN BREAKERS		CONTACTOR		CONTROL	P. E. CONTROL:				
A	240V	2 POLE	100A	600V	6 POLE 30A	PE	LOAD CENTER			
POLE	RATING	DESCRIPTION		KVA	AØ	BØ	KVA	DESCRIPTION	RATING	POLE
1	15/2	PHOTOCELL		0.1	0.9		0.8	SOUTH INTERCHANGE SIGNAL LUMINAIRES	20/2	2
3				0.1		0.9	0.8			4
5	50/1	S. TRAFFIC CONTROLLER		0.0	0.0		0.0			6
7				0.0		0.0	0.0		8	
9				0.0	0.0		0.0			10
11				0.0		0.0	0.0			12
13				0.0	0.0		0.0			14
15				0.0		0.0	0.0			16
17				0.0	0.0		0.0			18
19				0.0		0.0	0.0			20
					0.9	0.9	TOTAL KVA= 1.8 AMPS= 7.5			

LOAD CENTER "B" SUMMARY: TYPE 1A INSTALLATION										
LOAD CENTER LOCATION:							SERVICE: ML&P			
SERVICE: SINGLE PHASE, 3 WIRE, 120/240V W/GND NEUTRAL							METER SOCKET. Y			
LOAD	MAIN BREAKERS		CONTACTOR		CONTROL		P. E. CONTROL:			
A	240V	2 POLE 100A	600V	6 POLE 30A	PE		LOAD CENTER			
POLE	RATING	DESCRIPTION		KVA	AØ	BØ	KVA	DESCRIPTION	RATING	POLE
1	15/2	PHOTOCELL		0.1	0.6		0.5	NORTH INTERCHANGE SIGNAL LUMINAIRES	20/2	2
3				0.1		0.6	0.5			4
5	50/1	N. TRAFFIC CONTROLLER		0.0	0.0		0.0			6
7				0.0		0.0	0.0		8	
9				0.0	0.0		0.0			10
11				0.0		0.0	0.0			12
13				0.0	0.0		0.0			14
15				0.0		0.0	0.0			16
17				0.0	0.0		0.0			18
19				0.0		0.0	0.0			20
					0.6	0.6				
							TOTAL KVA= 1.2 AMPS= 5.0			

VOLTAGE DROP CALCULATION - LC-A							
1-PH, 2W CONFIGURATION, 1 COPPER CONDUCTOR PER PHASE IN RMC. TEMPERATURE RATING 75°C.							
CKT #	SEGMENT SIZE (AWG)	SEGMENT LENGTH (FT)	VOLTAGE	POWER FACTOR	LOAD (KVA)	TOTAL (AMPS)	SEG. (%VD)
2,4	8	430	240	0.8	1.5	6.25	0.55
5	6	430	120	0.9	4.8	40.0	1.37

VOLTAGE DROP CALCULATION - LC-B							
1-PH, 2W CONFIGURATION, 1 COPPER CONDUCTOR PER PHASE IN RMC. TEMPERATURE RATING 75°C.							
CKT #	SEGMENT SIZE (AWG)	SEGMENT LENGTH (FT)	VOLTAGE	POWER FACTOR	LOAD (KVA)	TOTAL (AMPS)	SEG. (%VD)
2,4	8	800	240	0.8	1.0	4.17	0.55
5	6	690	120	0.9	4.8	40.0	1.37

SHORT CIRCUIT CALCULATION - LC-A	
240V AC IN A 1-PH, 2W CONFIGURATION WITH A POWER-FACTOR OF 1.00, 1 COPPER CONDUCTOR PER PHASE IN A RMC. TEMPERATURE RATING 75°C.	
TRANSFORMER RATING	25KVA
VOLTAGE	240/120V
TRANSFORMER IMPEDANCE	1.2%
LET-THRU SHORT CIRCUIT CURRENT	8,681A
LENGTH TO FAULT	40FT
SERVICE CONDUCTOR SIZE	1/0 AWG ALUMINUM
CONDUIT	NON-MAGNETIC
"C" CONSTANT	9317
LINE-LINE FAULT	6,624A
LINE-NEUTRAL FAULT	6,741A

SHORT CIRCUIT CALCULATION - LC-B	
240V AC IN A 1-PH, 2W CONFIGURATION WITH A POWER-FACTOR OF 1.00, 1 COPPER CONDUCTOR PER PHASE IN A RMC. TEMPERATURE RATING 75°C.	
TRANSFORMER RATING	25KVA
VOLTAGE	240/120V
TRANSFORMER IMPEDANCE	1.2%
LET-THRU SHORT CIRCUIT CURRENT	8,681A
LENGTH TO FAULT	40FT
SERVICE CONDUCTOR SIZE	1/0 AWG ALUMINUM
CONDUIT	NON-MAGNETIC
"C" CONSTANT	9317
LINE-LINE FAULT	6,624A
LINE-NEUTRAL FAULT	6,741A

PRE-PS&E JULY 2013

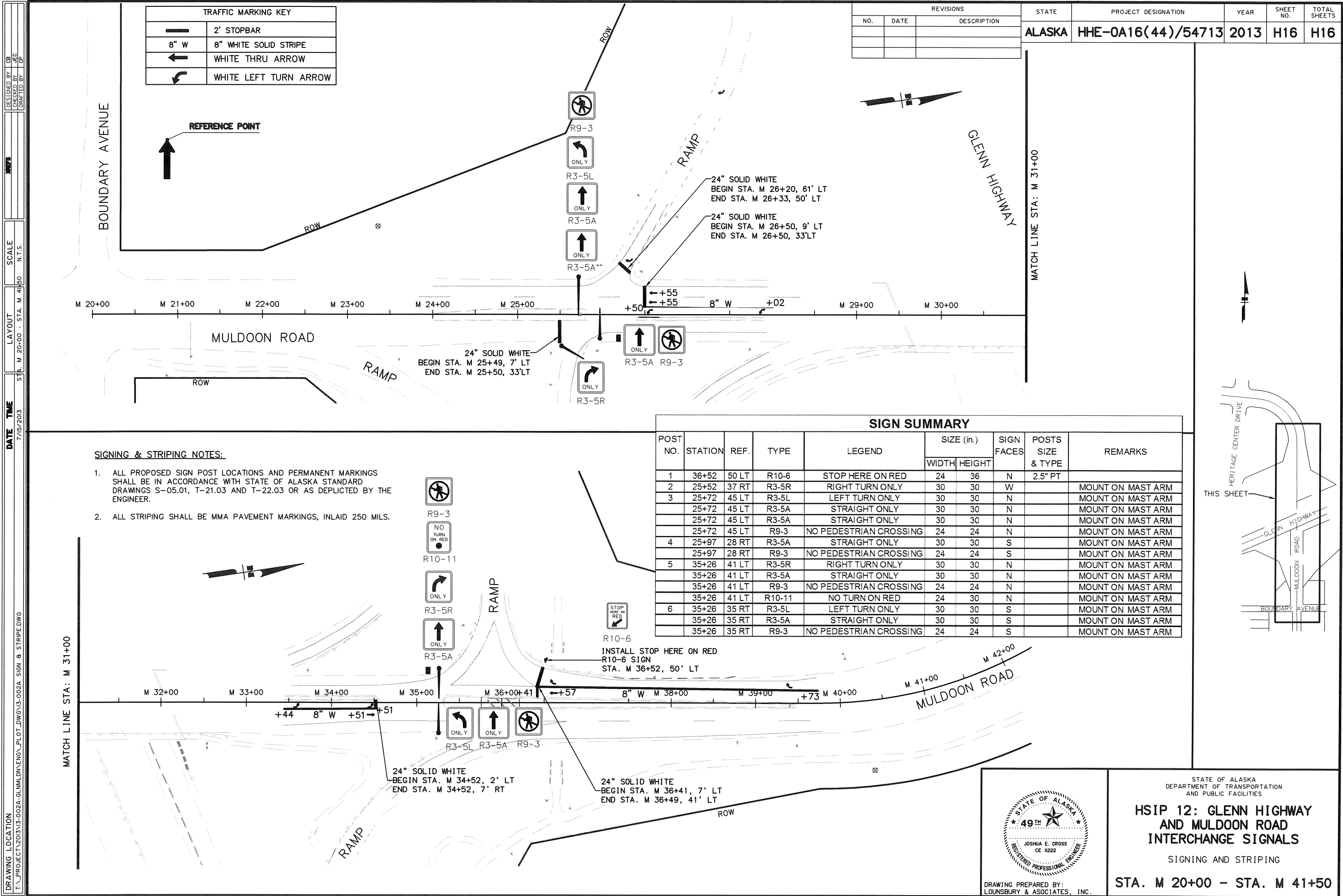


EDC, INC

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HSIP 12: GLENN HWY & MULDOON
ROAD INTERCHANGE SIGNALS

LOAD CENTER SCHEDULES



TRAFFIC MARKING KEY	
	2' STOPBAR
8" W 	8" WHITE SOLID STRIPE
	WHITE THRU ARROW
	WHITE LEFT TURN ARROW

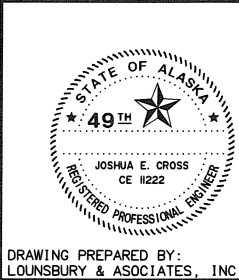
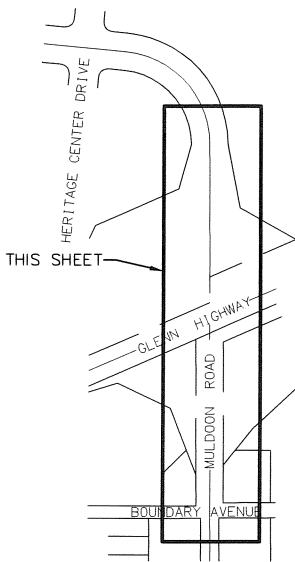
REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HHE-0A16(44)/54713	2013	H16	H16

SIGNING & STRIPING NOTES:

- ALL PROPOSED SIGN POST LOCATIONS AND PERMANENT MARKINGS SHALL BE IN ACCORDANCE WITH STATE OF ALASKA STANDARD DRAWINGS S-05.01, T-21.03 AND T-22.03 OR AS DEPICTED BY THE ENGINEER.
- ALL STRIPING SHALL BE MMA PAVEMENT MARKINGS, INLAID 250 MILS.

SIGN SUMMARY									
POST NO.	STATION	REF.	TYPE	LEGEND	SIZE (in.)		SIGN FACES	POSTS SIZE & TYPE	REMARKS
					WIDTH	HEIGHT			
1	36+52	50 LT	R10-6	STOP HERE ON RED	24	36	N	2.5" PT	
2	25+52	37 RT	R3-5R	RIGHT TURN ONLY	30	30	W		MOUNT ON MAST ARM
3	25+72	45 LT	R3-5L	LEFT TURN ONLY	30	30	N		MOUNT ON MAST ARM
	25+72	45 LT	R3-5A	STRAIGHT ONLY	30	30	N		MOUNT ON MAST ARM
	25+72	45 LT	R3-5A	STRAIGHT ONLY	30	30	N		MOUNT ON MAST ARM
	25+72	45 LT	R9-3	NO PEDESTRIAN CROSSING	24	24	N		MOUNT ON MAST ARM
4	25+97	28 RT	R3-5A	STRAIGHT ONLY	30	30	S		MOUNT ON MAST ARM
	25+97	28 RT	R9-3	NO PEDESTRIAN CROSSING	24	24	S		MOUNT ON MAST ARM
5	35+26	41 LT	R3-5R	RIGHT TURN ONLY	30	30	N		MOUNT ON MAST ARM
	35+26	41 LT	R3-5A	STRAIGHT ONLY	30	30	N		MOUNT ON MAST ARM
	35+26	41 LT	R9-3	NO PEDESTRIAN CROSSING	24	24	N		MOUNT ON MAST ARM
	35+26	41 LT	R10-11	NO TURN ON RED	24	30	N		MOUNT ON MAST ARM
6	35+26	35 RT	R3-5L	LEFT TURN ONLY	30	30	S		MOUNT ON MAST ARM
	35+26	35 RT	R3-5A	STRAIGHT ONLY	30	30	S		MOUNT ON MAST ARM
	35+26	35 RT	R9-3	NO PEDESTRIAN CROSSING	24	24	S		MOUNT ON MAST ARM



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**HSIP 12: GLENN HIGHWAY
AND MULDOON ROAD
INTERCHANGE SIGNALS**

SIGNING AND STRIPING

STA. M 20+00 - STA. M 41+50

DRAWING PREPARED BY:
LOUNSBURY & ASSOCIATES, INC.