

CITY OF HOMER

PUBLIC WORKS DEPARTMENT



		REVISIONS	I LAIN			ILM NO.		
NO.	DATE	DESCRIPTION	0010	A1	A3			
			2016	PLAN SET TOTAL	38			

MAYOR BETH WYTHE

CITY MANAGER KATIE KOESTER

PUBLIC WORKS DIRECTOR CAREY S. MEYER, P.E.

CITY COUNCIL MEMBERS
DAVID LEWIS
GUS VAN DYKE
DONNA ADERHOLD
CATRIONA REYNOLDS
BRYAN ZAK
HEATH SMITH

WADDELL WAY
ROAD AND WATER MAIN
IMPROVEMENTS

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THIS PROJECT	
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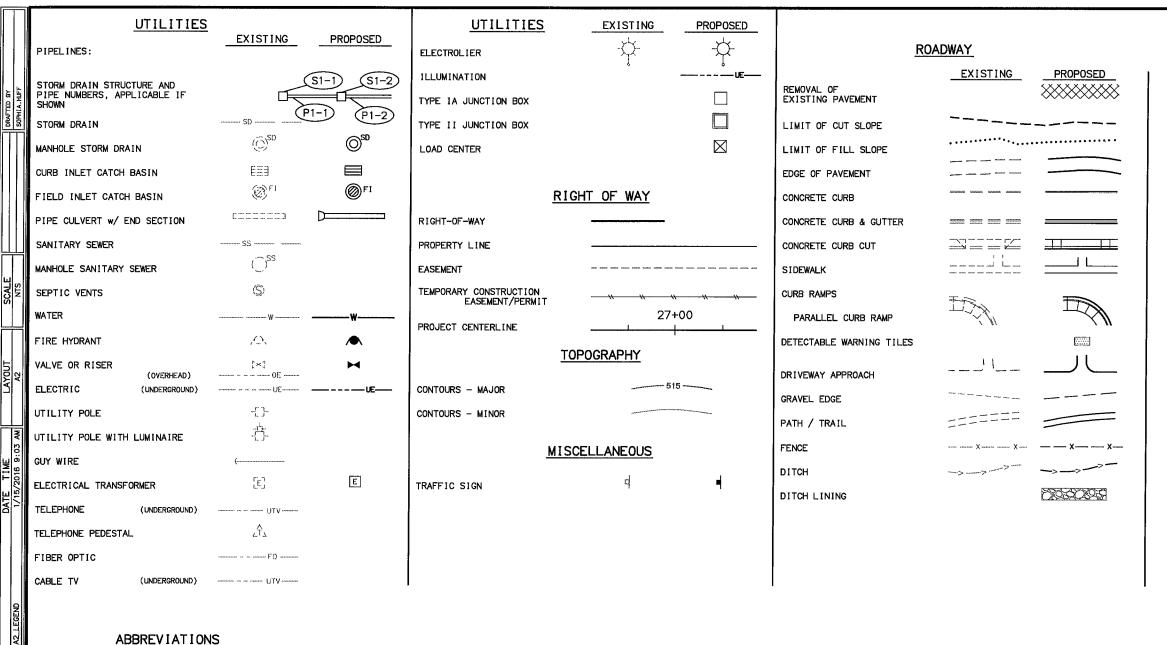
INDEX						
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Н6	ILLUMINATION SUMMARIES					
H7-H9	SIGN DETAILS					
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U2	TYPICAL TRENCH SECTION					
U3U4	WATER MAIN PLAN AND PROFILE					
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CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT

3575 HEATH STREET
HOMER, ALASKA 99803
PHONE: (907) 235-3170
FAX: (907) 235-3145

03/16/2016 ADJUDICATED PLAN SET



AC - ASPHALT CEMENT ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS AWWA - AMERICAN WATER WORKS ASSOCIATION BF - BOARD FOOT B.O.P. - BOTTOM OF PIPE CB - CATCH BASIN AND CONSTRUCT CATCH BASIN CMP - CORRUGATED METAL PIPE C.O.H. - CITY OF HOMER CY - CUBIC YARD D.I.P. - DUCTILE IRON PIPE DOT - DEPARTMENT OF TRANSPORTATION E - EASTING EA - EACH ELEV - ELEVATION F&I - FURNISH AND INSTALL FT - FOOT OR FEET GRSC - GALVANIZED RIGID STEEL CONDUIT GV - GATE VALVE H - HORIZONTAL HDPE - HIGH-DENSITY POLYETHYLENE

IPS - IRON PIPE SIZE I - LENGTH LF - LINEAR FOOT LOC - LIP OF CURB LT - LEFT LS - LUMP SUM MAX - MAXIMUM MIN - MINIMUM MJ - MECHANICAL JOINT MSF - THOUSAND SQUARE FEET N - NORTHING NO. - NUMBER N.T.S. - NOT TO SCALE

HMWPE - HIGH MOLECULAR WEIGHT POLYETHYLENE

INV - INVERT

O.S.H.A. - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION VPI - VERTICAL POINT OF INTERSECTION PC - POINT OF CURVATURE

P.C.C. - PORTLAND CEMENT CONCRETE PI - POINT OF INTERSECTION PSI - POUNDS PER SQUARE INCH

PT - POINT OF TANGENCY

R - RADIUS RT - RIGHT

R.O.W. - RIGHT OF WAY S - SUPERELEVATION RATE SDMH - STORM DRAIN MANHOLE SDR - STANDARD DIMENSION RATIO

SHLD - SHOULDER STA. - STATION SY - SQUARE YARD TBC - TOP BACK OF CURB

T - TANGENT TYP. - TYPICAL V - VERTICAL VB - VALVE BOX

A2 A3 ADDENDUM NO. ATTACHMENT NO. REVISIONS NO. DATE DESCRIPTION

TOTAL SHEETS

SHEET NO.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC

CITY OF HOMER, ALASKA



PHONE: (907) 235-3170



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

LEGEND SHEET

GENERAL NOTES:

- CONTRACTOR SHALL COMPLETE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF HOMER STANDARD SPECIFICATIONS LATEST EDITION INCLUDING ITEMS. DRAWINGS, TECHINICAL SPECIFICATIONS, AND SPECIAL PROVISIONS TAKE PRECEDENCE OVER THE STANDARD SPECIFICATIONS.
- 2. THE CITY SHALL OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE PERMITS SHALL BE MAINTAINED AT THE JOB SITE.
- 3. CONTRACTOR SHALL MAINTAIN "REDLINE" RECORD DRAWINGS ON A CLEAN SET OF CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL MAINTAIN THE "REDLINES" CURRENT ON A DAILY BASIS WHICH SHALL BE AVAILABLE TO THE ENGINEER FOR INSPECTION ON THE JOB SITE. CONTRACTOR SHALL RECORD SURVEY NOTES AND SUBMIT DAILY TO THE ENGINEER. CONTRACTOR SHALL RECORD SURVEY NOTES FOR SUBMITTAL WITH RECORD DRAWINGS, INCLUDING HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD. CONTRACTOR SHALL RECORD ALL DEVIATIONS FROM THE PLANS.
- 4. CONSTRUCTION OPERATIONS REQUIRED FOR THIS PROJECT SHALL REMAIN WITHIN EXISTING CITY OF HOMER AND STATE OF ALASKA RIGHTS-OF-WAY AND EASEMENTS, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND THE AFFECTED PROPERTY OWNER.
- 5. LOCATIONS DEPICTED FOR THE UTILITIES AND OTHER EXISTING FEATURES ARE APPROXIMATE. SOME UTILITIES HAVE BEEN LOCATED FROM RECORD DRAWINGS AND UTILITY COMPANY LOCATES. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
- 6. UNDERGROUND ELECTRICAL AND TELECOMMUNICATION LINES OCCUR WITHIN THE PROJECT AREA; CONTRACTOR SHALL COORDINATE WORK ACCORDINGLY. ALL WORK IN CLOSE PROXIMITY TO EXISTING UNDER-GROUND LINES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, CODES AND GUIDELINES, AND THE ELECTRICAL FACILITY CLEARANCE REQUIREMENTS OF THE GOVERNING UTILITY. CONTRACTOR SHALL HAND DIG WITHIN TWO FEET OF BURIED ELECTRICAL CABLE.
- 7. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT (ROADS, PARKING AREAS, DRIVEWAYS, ETC.,) TO A LINE 2 FEET BEYOND THE PROPOSED IMPROVEMENTS, DURING THE INITIAL EXCAVATION OPERATIONS. IF EXISTING PAVEMENT HAS BEEN LIFTED, IF EDGE DOES NOT OCCUR IN UNDISTURBED MATERIAL, OR IF EDGE IS LOCATED WITHIN A TRAVEL LANE, FURTHER REMOVAL MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, TO PROVIDE A PROPER TRANSITION BETWEEN NEW AND EXISTING PAVEMENT. SAW CUTTING OF EXISTING PAVEMENT IS INCIDENTAL TO THE BID ITEM "REMOVE PAVEMENT", AND NO SEPARATE PAYMENT SHALL BE MADE. SAWCUTS WITHIN THE ROADWAY SHALL BE SKEWED AT AN ANGLE OF 15 TO 25 DEGREES WHERE MATCHING EXISTING ASPHALT.
- 8. CONTRACTOR SHALL APPLY TACK COAT TO THE SAW CUT ASPHALT FACE PRIOR TO PAVING. CONTRACTOR SHALL SAWCUT CURB & GUTTER AND SIDEWALK AT THE NEAREST JOINT AT OR BEYOND REMOVAL LIMITS OR AS DIRECTED BY THE ENGINEER. TACK COAT IS INCIDENTAL TO THE RESPECTIVE BID ITEM.
- 9. CONTRACTOR SHALL MAINTAIN STOP SIGNS AND STREET NAME SIGNS OPERATIONAL IN THE PROJECT AREA DURING CONSTRUCTION.
- 10.LIMITS OF EXCAVATION AND BACKFILL SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 11. CONTRACTOR SHALL REMOVE ORGANIC MATERIAL FROM THE SUBGRADE TO A DEPTH TO BE DETERMINED BY THE ENGINEER. CONTRACTOR SHALL NOT PLACE OR SHALL NOT OTHERWISE UTILIZE ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL FOR BACKFILL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 12. WORK AND MATERIALS REQUIRED FOR REMOVING LITTER OR DEBRIS THAT EXIST WITHIN THE PROJECT LIMITS ARE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE.
- 13. CONTRACTOR SHALL REPLACE ALL DISTURBED PROPERTY CORNERS. PAYMENT FOR REPLACING DISTURBED PROPERTY CORNERS IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- 14. CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED AREAS WHERE OTHER SURFACE IS NOT SPECIFIED.
- 15. CONTRACTOR SHALL RESTORE DISTURBED PROPERTY TO PRECONSTRUCTION CONDITION(S), UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR RESTORING DISTURBED PROPERTY IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- 16.IF CONTAMINATED SOIL, GROUNDWATER, OR FREE-PRODUCT ARE ENCOUNTERED, THE CONSTRUCTION CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER WHO WILL IMMEDIATELY CONTACT THE DEC PREVENTION AND EMERGENCY RESPONSE (PERP) OFFICE STAFF AT (907) 465-5340 / FAX (907)465-2237 IN ACCORDANCE WITH SPILL REPORTING REQUIREMENTS UNDER 18 AAC 75.300, AND COORDINATE MANAGEMENT OF ALL CONTAMINATED MEDIA WITH EMERGENCY RESPONSE PERSONNEL.

PROJECT SURVEY INFORMATION:

THIS PROJECT WAS DESIGNED FROM A PLANIMETRIC AND TOPOGRAPHIC SURVEY BY STEVEN C. SMITH P.L.S. WHO PROVIDED THE FOLLOWING SURVEY CONTROL.

BASIS OF BEARING

- 1. BASIS OF BEARING FOR THIS SURVEY WAS DETERMINED BY A HIGH PRECISION GPS SURVEY USING TOPCON DUAL-FREQUENCY HiPer V RECEIVERS, DIFFERENTIALLY COLLECTED AND PROCESSED WITH MAGNET OFFICE VERSION 1.2.1 SOFTWARE. NAD83 ALASKA STATE PLANE GRID COORDINATES (U.S. SURVEY FEET) OBTAINED FROM THE GPS OBSERVATIONS WERE BASED ON THE NGS PUBLISHED VALUES FOR FEDERAL BASE NETWORK CONTROL STATION "HOMAIR" (PID TT0155).
- 2. TRUE BEARINGS AND DISTANCES WERE DETERMINED BY ROTATING AND SCALING FROM GRID USING FEDERAL BASE NETWORK CONTROL STATION "HOMAIR" AS A SCALING POINT. TRUE BEARINGS WERE DETERMINED BY ROTATING GRID INVERSE AZIMUTHS -1°17'13.4". TRUE DISTANCES WERE OBTAINED BY DIVIDING GRID INVERSE DISTANCES BY 0.999986696.
- 3. THE RESULTING SCALED COORDINATES WERE TRANSLATED TO A LOCAL COORDINATE SYSTEM BASED ON FEDERAL BASE NETWORK CONTROL STATION "HOMAIR" N=100,000 E=100,000. ALL COORDINATE VALUES REPRESENT GROUND DISTANCES IN U.S. SURVEY FEET ORIENTED TO TRUE NORTH.

BASIS OF VERTICAL DATUM
BASIS OF VERTICAL DATUM FOR THIS SURVEY IS THE NAVD88 NGS PUBLISHED
VALUE FOR FEDERAL BASE NETWORK CONTROL STATION "HOMAIR" (PID
TT0155). ORTHOMETRIC HEIGHTS (ELEVATIONS) WERE DETERMINED FROM
ELLIPSOID HEIGHTS USING GEOIDO9. ELEVATIONS ARE IN U.S. SURVEY
FFFT

PROJECT CONTROL

CP-1 N=102,344.3273 E=93,791.1612 EL=76.33 PK NAIL IN ASPHALT SIDEWALK AT SE QUADRANT LAKE ST. / SMOKY BAY WAY

CP-2 N=102,156.1573 E=92,913.6595 EL=82.42

PK NAIL IN ASPHALT SIDEWALK EAST SIDE HEATH STREET

THE PROJECT RIGHT-OF-WAY WAS SURVEYED AND PLATTED BY KENTON T. BLOOM, P.L.S. WITH SEABRIGHT SURVEY + DESIGN. SEE "WADDELL PARK 2016 REPLAT".

	A3	A3									
	ADDENDUM NO.										
ATTACHMENT NO.											
	R	EVIS	IONS								
ND.	ND. DATE DESCRIPTION										

TOTAL SHEETS

SHEET NO.

STANDARD DRAWING INDEX

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

CITY OF HOMER

200.06 COMPACTION OF BACKFILL 300.01 CURB AND GUTTER CROSS SECTIONS

600.05 HYDRANT GUARD POSTS

600.10 GATE VALVE EXTENSION ROD

700.07 SIGN PLACEMENT NO CURB OR SHOULDER

700.09 SIGN PLACEMENT CURB WITHOUT SIDEWALK

700.10 SIGN PLACEMENT CURB WITH SIDEWALK AND PARKWAY 800.01 STORM DRAIN CORRUGATED METAL PIPE BAND DETAIL

800.03 STORM DRAIN CORROGATED METAL

800.05 STORM DRAIN MANHOLE RING ADJUSTMENT

800.08 STORM DRAIN MANHOLE COVER

800.09 STORM DRAIN MANHOLE FRAME

800.11 STORM DRAIN PRECAST CATCH BASIN FOR TYPE 1 CURB + GUTTER

800.12 STORM DRAIN CATCH BASIN INLET FOR TYPE 1 CURB + GUTTER

STATE OF ALASKA

CR-T-01.02 UNSIGNALIZED INTERSECTION STOP AND CROSSING

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC
FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT

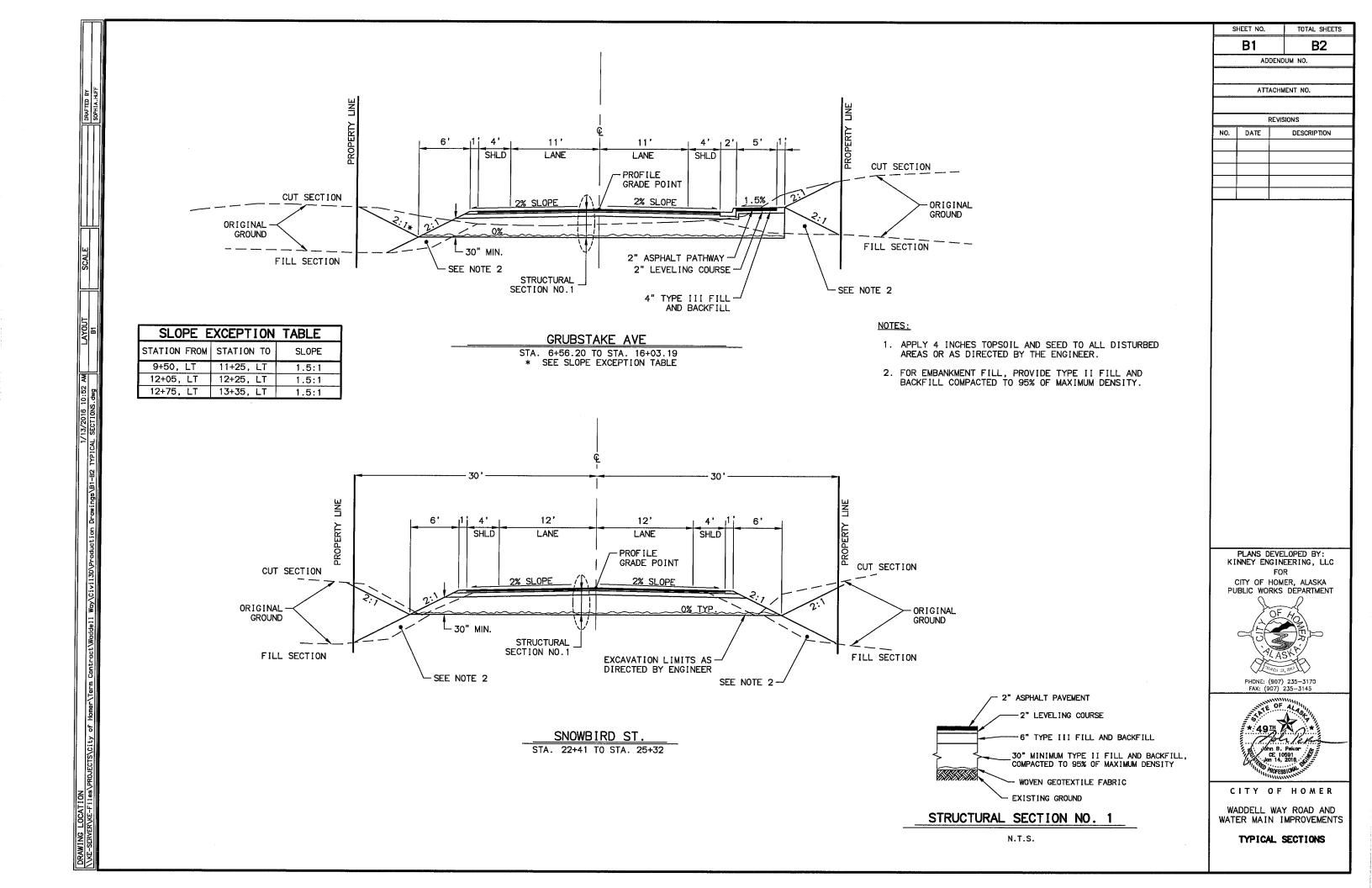
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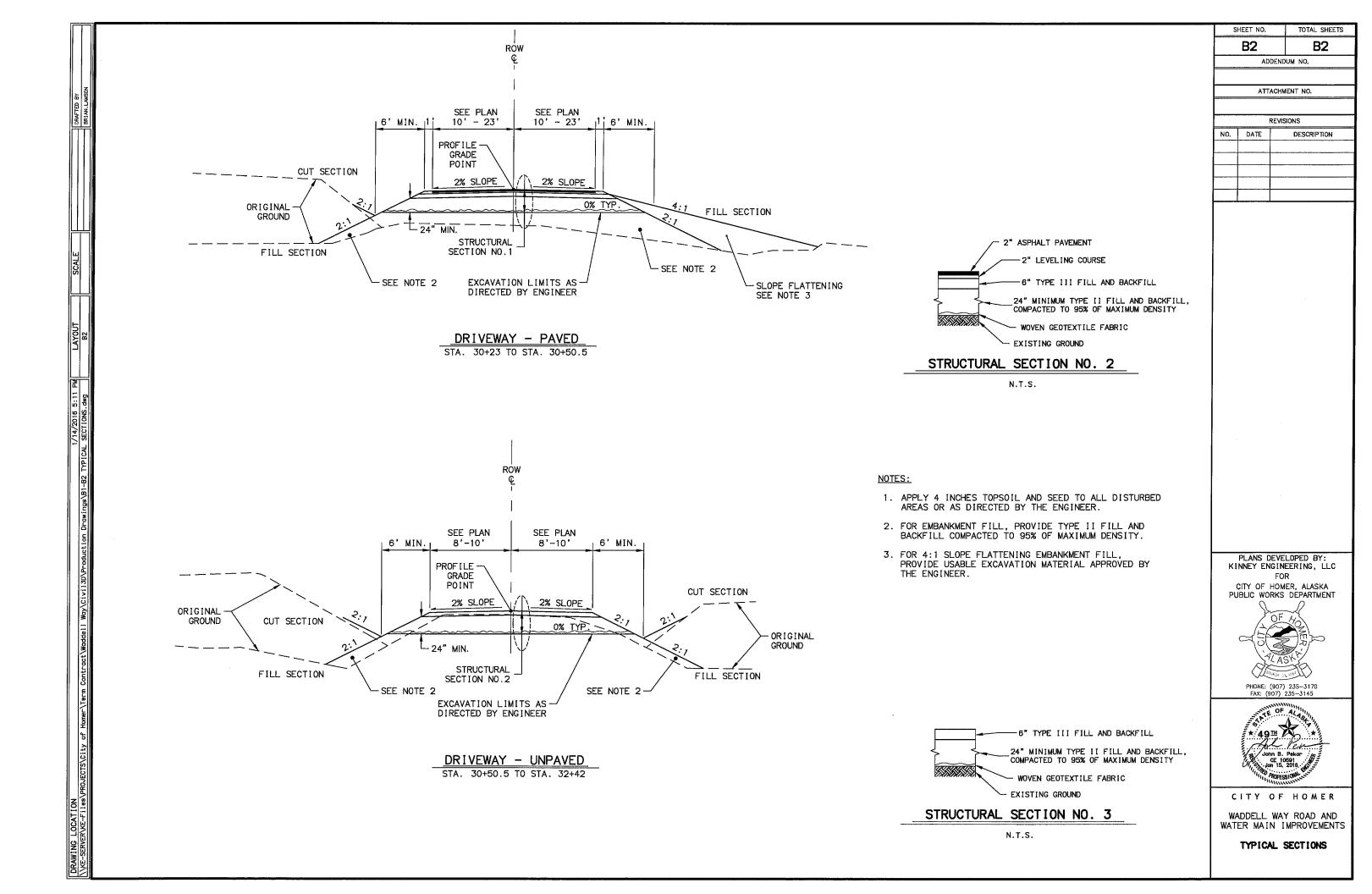


CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

GENERAL NOTES
AND
SURVEY CONTROL





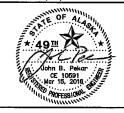
TEN NO	CDEO NO	WORK DECOREDITION		ESTIMATED
ITEM NO. SPEC. NO.		WORK DESCRIPTION	UNIT	QUANTITY
A-1	101	MOBILIZATION AND DEMOBILIZATION	LS	1
A-2	102	CONSTRUCTION SURVEYING	LS	1
A-3	103	TRAFFIC MAINTENANCE	LS	1
A-4	202	CLEARING AND GRUBBING	LS	1
A-5	203	REMOVAL OF OBSTRUCTIONS	LS	1
A-6	204	EXCAVATION	CY	5,150
A-7	205	TYPE II FILL AND BACKFILL	TON	13,150
A-8	205	TYPE III FILL AND BACKFILL	TON	2,130
A-9	206	LEVELING COURSE	TON	670
A-10	208	COMPACTION CONTROL BY THE CONTRACTOR	LS	. 1
A-11	219	REMOVAL OF EXISTING PAVEMENT	SY	972
A-12	220	DITCH LINING	TON	10
A-12	302	CURB AND GUTTER, ALL TYPES	LF	1,094
A-II	303	CONCRETE SIDEWALK, 6" THICK	SY	
A-14	306	P.C.C. CURB RAMP (PARALLEL)	EA	4
A-15	306	DETECTABLE WARNINGS	EA	4
A-16	401	ASPHALT PAVEMENT	TON	PEA
A-10	402	TRAFFIC MARKINGS	LS	650
<u> </u>	702	CONTANT OTTEN	LS	1
A-18	602	FURNISH AND INSTALL WATER MAIN	LF	992
A-19	603	FURNISH AND INSTALL GATE VALVE, VALVE BOX AND MARKER	EA	5
A-20	604	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY (SINGLE PUMPER)	EA	2
A-21	607	ADJUST VALVE BOX TO FINISH GRADE	EA	5
A-22	702 (W)	WOVEN GEOTEXTILE FABRIC	SY	7,605
A-23	704	FURNISH & INSTALL 4" THICK INSULATION	BF	432
A-24	707	FURNISH & INSTALL STANDARD SIGN	EA	14
A-25	708	SEEDING (TYPE 1)	MSF	21
A-26	710	TOPSOIL (4" DEPTH)	MSF	21
A-27	712	CHAIN LINK SECURITY FENCE 8' (9 GAGE)	LF	80
A-28	712	GATE (36' WIDE DOUBLE SWING 8' HT)	EA	1
A-29	802	FURNISH AND INSTALL CMP. 12"	<u> </u>	10
A-30	802	FURNISH AND INSTALL CMP, 12	LF LF	42 152
A-31	802	FURNISH AND INSTALL CMP. 24"	LF LF	95
A-32	802-E	FURNISH AND INSTALL CMP END SECTION	EA	2
A-33	804	STORM DRAIN MANHOLE	EA	2
A-34	806	CONSTRUCT CATCH BASIN	EA	2
A-35	807	CONNECT TO EXISTING STORM DRAIN MANHOLE	EA	
A 36	810	DITCH LINING	TON	~~~~~
A-37	8002	TRENCH AND BACKFILL (2' X 3')	 	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
A-38	8004	DRIVEN PILE LUMINAIRE POLE FOUNDATIONS	EA	8
A-39	8005	SLIP BASE LUMINAIRE POLE (22' LENGTH)	EA	7
A-40	8005	LUMINAIRE ARM (8' LENGTH)	EA	6
A-41	8005	LUMINAIRE ARM (15' LENGTH)	EA	_ 1
A-42	8007	SCHEDULE 40 HDPE CONDUIT (2")	LF	950
A-43	8007	GRC STEEL CONDUIT (2")	LF	130
A-44	8007	SCHEDULE 40 HDPE CONDUIT (4")	LF	180
A-45	8008	REMOVE JUNCTION BOX	EA	1
A-46	8008	JUNCTION BOX (TYPE 1A)	EA	9
A-47	8008	JUNCTION BOX (TYPE II)	EA	2
A-48	8010	3 CONDUCTOR, #8 AWG XHHW	LF	1,150
A-49	8014	POST-MOUNTED LOAD CENTER UNDERGROUND SERVICE, TYPE 2	EA	1
A-50 A-51	8023	LUMINAIRE, 135W LED, 60 LED, TYPE 3 OPTICS	EA	7
A-01	8028	RELOCATE LUMINAIRE POLE	EA	1
A-52	9001	STORM WATER POLLUTION PREVENTION PLAN, TYPE 3	LS	1

	SHEET NO.		TOTAL SHEETS
	C1		C1
	AD	DEND	UM NO.
	ATT	ACHM	ENT NO.
		···	
	R	EVIS	IONS
NO.	DATE		DESCRIPTION
Λ	3/8/16	D	OT T/S COMMENTS
			AND ADDENDUMS

TABLE OF ESTIMATING FACTORS						
ITEM DESCRIPTION	ESTIMATING FACTOR					
TYPE II FILL AND BACKFILL	144 LBS. / C.F.					
TYPE III FILL AND BACKFILL	144 LBS. / C.F.					
LEVELING COURSE	144 LBS. / C.F.					
DITCH LINING	108 LBS. / C.F.					
ASPHALT PAVEMENT	151 LBS. / C.F.					
	ITEM DESCRIPTION TYPE II FILL AND BACKFILL TYPE III FILL AND BACKFILL LEVELING COURSE DITCH LINING					



PHONE: (907) 235-3170



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

ESTIMATE OF QUANTITIES

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PEC NO. 20	3								
	REMOVAL OF OBSTRUCTIONS								
SHEET	DESCRIPTION	STATION	OFFSET	REMARKS					
F1	LIGHT POLE FOUNDATION	6+63	1 RT	RELOCATE POLE TO NEW FOUNDATION					
F1	REMOVE PIPE	6+45	LT	EXISTING STORM DRAIN PIPE					
F1	HEATH ST., CURB AND GUTTER	6+54	LT & RT	APPROX. 200 LF					
F1	CATCH BASIN	6+56	27 LT	HEATH ST. CATCH BASIN					
F1	REMOVE PIPE	9+77 T0 9+92	70 RT T0 34 RT	OLD DRIVEWAY CULVERT TO LOT 3-A-1					
F2	CHAIN LINK FENCE	14+41 T0 15+32	30 LT T0 20 LT	AFTER FENCE REMOVAL PROVIDE TEMPORARY FENCE TO SECURE HEA EQUIPMENT YARD					
F2	SIGN, POST, FOUNDATION	15+23	16 LT	NOT CITY MAINTAINED SIGN					
F2	REMOVE PIPE	15+36 T0 15+78	18 LT T0 54 LT	OLD HEA DRIVEWAY CULVERT					
F2	STOP SIGN, STREET SIGNS, POST, & FOUNDATION	15+54	45 RT	AT LAKE ST / WADDELL WAY					
F3	SIGN, POST, FOUNDATION	22+65	16 RT	NOT CITY MAINTAINED SIGN ON SNOWBIRD ST ALIGNMENT					

REMOVAL OF EXISTING PAVEMENT								
SHEET	LOCATION	SY	REMARKS					
F1	STA. 6+22 TO STA. 6+56	272	HEATH ST. INTERSECTION					
F2	STA. 15+41 TO STA. 16+01	367	LAKE ST INTERSECTION					
F3	STA. 22+41 TO STA. 22+43	7	SNOWBIRD ST					
F1, F4	STA. 6+58 TO 7+71	190	EXISTING HEA DRIVEWAY					
F1, F4	STA. 6+55	25	TWO FOOT OFFSET FROM REMOVED CUI					
F1, F4	STA. 6+55	111	EXISTING AC PAVEMENT SIDEWALK C EAST SIDE OF HEATH ST.					
	TOTAL	971						

DITCH LINING									
START STA.	END STA.	LENGTH (FT)	OFFSET	AVG WIDTH (FT)	AREA (SF)	DEPTH (FT)	VOLUME (CY)	TON	REMARKS
10+12	10+36	25	22 LT	12	297	0.5	5.5	8.0	
10+04	10+12	8	104	8	59	0.5	1.1	2.0	
				TOTAL	356		6.6	10.0	

	CURB AI	ND GUTTE	R, ALL T	YPES
SHEET	LOCATION	OFFSET	LENGTH (LF)	NOTES
F1	STA. 6+56 TO STA. 9+81	RT	370	LIP OF CURB MATCHES PAVEMENT ELEV.
F1	STA. 6+56 TO STA. 6+89	LT	52	LIP OF CURB MATCHES PAVEMENT
F2	STA. 10+24 TO STA. 15+47	RT	555	LIP OF CURB MATCHES PAVEMENT ELEV.
F4	STA. 6+56	RT.	118	HEA DRIVEWAY AND SIDEWALK REBUIL
	(TOTAL	1,094	

SPEC NO. 303						
CONCRETE SIDEWALK, 6" THICK						
SHEET	LOCATION	QTY (SY)				
F4	CURB CUT FOR HEA DRIVEWAY ON HEATH ST	29				
	TOTAL	29				

	P.C.C	CURB F	RAMP (PARALLEL	.) & DETECTABI	LE WARNINGS
SHEET	STATION	OFFSET	P.C.C. CURB RAMP (PARALLEL)	DETECTABLE WARNINGS	REMARKS
F1	6+62	21 LT	1	1	HEATH ST / GRUBSTAKE LT
F1	6+62	21 RT	1	1	HEATH ST / GRUBSTAKE RT
F1	9+75	22 RT	1	1	GRUBSTAKE / SNOWBIRD WES
~EL~	10+20	21 RT	222222222		GRUBSTAKE / SNOWBIRD EAS
- F2	15+56	49 RT	1	1	LAKE ST / CRUBSTAKE RT
$\sim\sim$	~~~~	$\sim\sim\sim$	~~~~~~	~~~~~	
	TOTAL		4	4	

5	SHEET NO.		TO	TAL SHEETS		
	D1			D2		
	AD	DEND	UM NO			
ATTACHMENT NO.						
	REVISIONS					
NO.	DATE		DESC	CRIPTION		
Λ	3/8/16	DO	T T/S	COMMENTS		
		-	ND AE	DENDUMS		

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170 FAX: (907) 235-3145



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS SUMMARY

FURNISH	I AND INSTAL	I FIRE HYD	RANT ASSEM	BLY (SINGLE PUMPER)
SHEET	STATION	OFFSET	QTY	REMARKS
U3	103+07	18 RT	1	LOT 3-A-1
U4	106+47	18 RT	1	LOT 2-A-1
	TOTAL		2	

	ADJUS1	Γ VALVE	BOX TO F	INISH GRADE
SHEET	STATION	OFFSET	QTY	REMARKS
F1	6+45	11 RT	1	EX. HEATH ST MAIN
F1	6+45	26 RT	1	EX. HEATH ST MAIN
F2	15+85	10 LT	1	EX. TEE ON LAKE ST. MAIN
F2	15+86	7 LT	1	EX. LAKE ST MAIN
F2	15+99	34 LT	1	EX. FIRE HYDRANT VALVE BO
	TOTAL		5	

WOVEN GEOTEXTILE FABRIC					
SHEET	LOCATION	QTY (SY)	REMARKS		
F1-F2	STA. 6+56 TO 15+98	4,781	GRUBSTAKE ST		
F1-F2	STA. 6+56 TO 15+98	401	ADDITIONAL FOR INTERSECTIONS		
F3	STA. 22+41 TO STA. 25+16	1,531	SNOWBIRD ST		
F4	STA. 30+16 TO STA. 32+43	892	WEST HEA DRIVEWAY ON HEATH ST		
	TOTAL	7,605			

PEC NO. 704	· · · · · · · · · · · · · · · · · · ·	A" TUIC	W INCHIATION
SHEET	FURNISH & INSTALL LOCATION	QTY (BOARD FOOT)	
F1	6+45, 20 LT	144	PLACE INSULATION 4 INCHES BELOW SD, L=6', W=6', 4 INCHES THICK
F1 U3	STA. 10+20, 12 RT STA. 103+78.57 to STA. 103+84.57	144	PLACE INSULATION 4 INCHES BELOW SD, L=6', W=6', 4 INCHES THICK
F2 U4	STA. 15+59, 17 RT STA. 109+15.24 to STA. 109+21.24	144	PLACE INSULATION 4 INCHES BELOW SD, L=6', W=6', 4 INCHES THICK
F2	STA. 15+71, 20 LT	144	PLACE INSULATION 4 INCHES BELOW SD, L=6', W=6', 4 INCHES THICK
	TOTAL	432	

CHAIN LINK SECURITY FENCE 8' (9 GAGE)					
START STA.	START OFFSET	END STA.	END OFFSET	LF	
14+41	30 LT	15+18	34 LT	80	
			TOTAL	80	

,	GAIE, JO WI	DE DUUBLE	SWING 8' HT	
START STA.	START OFFSET	END STA.	END OFFSET	EACH
15+18	34 LT	15+43	41 LT	1
			TOTAL	1

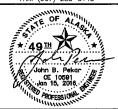
SPEC NO. 807			
CON	NECT TO EXI	STING STORM	DRAIN MANHOLE
SHEET	STATION	OFFSET	NOTES
F1	6+35	1 RT	
	7074		
	TOTAL	1	

S	HEET NO.	TOTAL SHEETS			
	D2	D2			
	ADDENI	DUM NO.			
	ATTACH	MENT NO.			
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NO.	DATE	DESCRIPTION			
NO.	1				
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PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR CITY OF HOMER, ALASKA



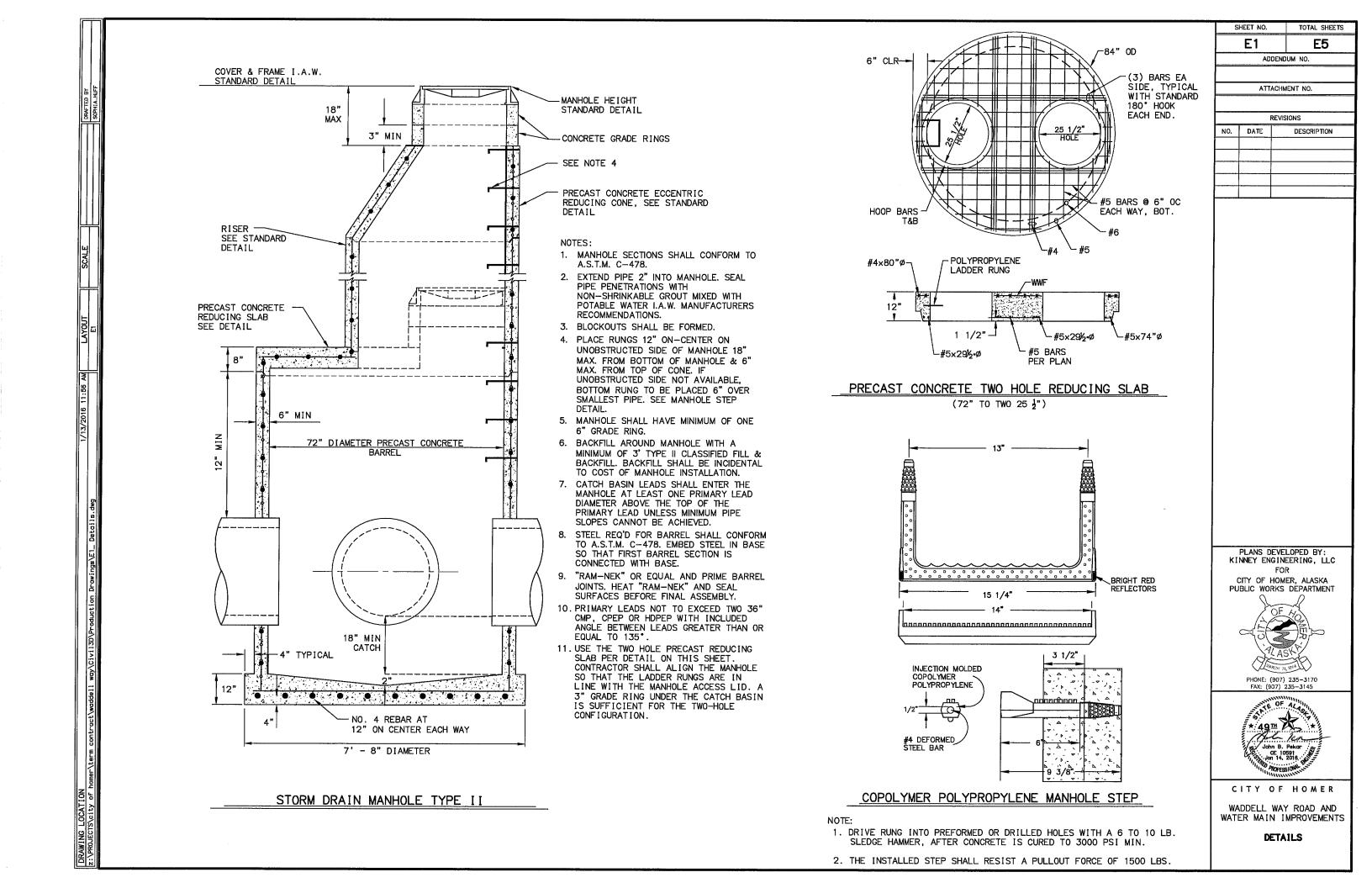
PHONE: (907) 235-3170 FAX: (907) 235-3145

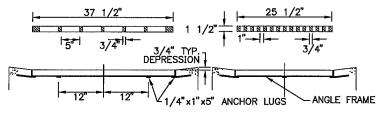


CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

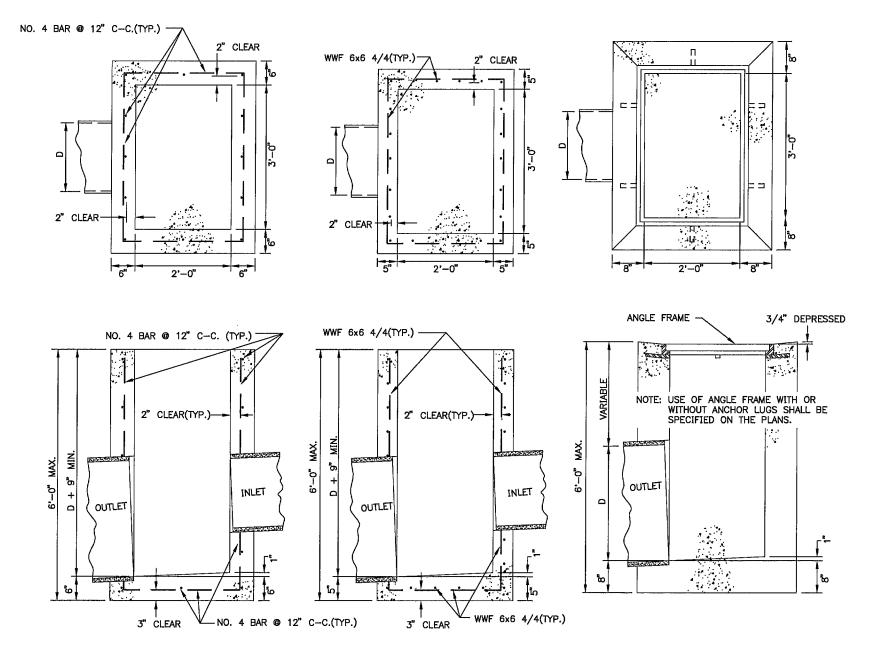
SUMMARY





NOTE: ALL ANGLE FRAME SHALL HAVE ANCHOR LUGS

FIELD INLET FRAME AND GRATE



REINFORCED CAST IN PLACE

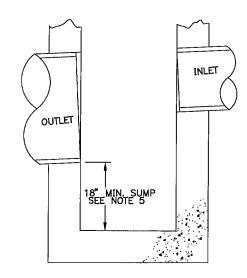
PRECAST

FIELD INLET BOX
CAST* IN PLACE

* MAY BE PRECAST OR REINFORCED CAST-IN-PLACE BOX.

NOTES:

- 1. CAST IN PLACE CONCRETE INLET BOX SHALL BE ALASKA DOT CLASS "W" CONCRETE.
- CONCRETE INLET BOX LOCATION SHALL BE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- 3. PRECAST OR REINFORCED CAST—IN—PLACE CONCRETE INLET BOXES MAY BE USED PROVIDED THEY ARE MODIFIED TO INCLUDE THE ANGLE FRAME AND IF APPROVED BY THE ENGINEER. PROVIDE SUBMITTAL FOR ONE OF THE CONCRETE INLET BOX TYPES TO THE ENGINEER FOR REVIEW AND APPROVAL.
- 4. CONCRETE INLET BOX SHALL BE PARALLEL TO ROADWAY CENTERLINE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- 5. SUMP SHALL BE PROVIDED ON ALL STORM DRAIN STRUCTURES.
- 6. PAYMENT FOR THE FIELD INLET BOX SHALL BE MADE UNDER ITEM 604 STORM DRAIN MANHOLE.



ATTACHMENT NO.

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NO. DATE DESCRIPTION

ADDENDUM NO.

TOTAL SHEETS

E5

SHEET NO.

E2

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR CITY OF HOMER, ALASKA



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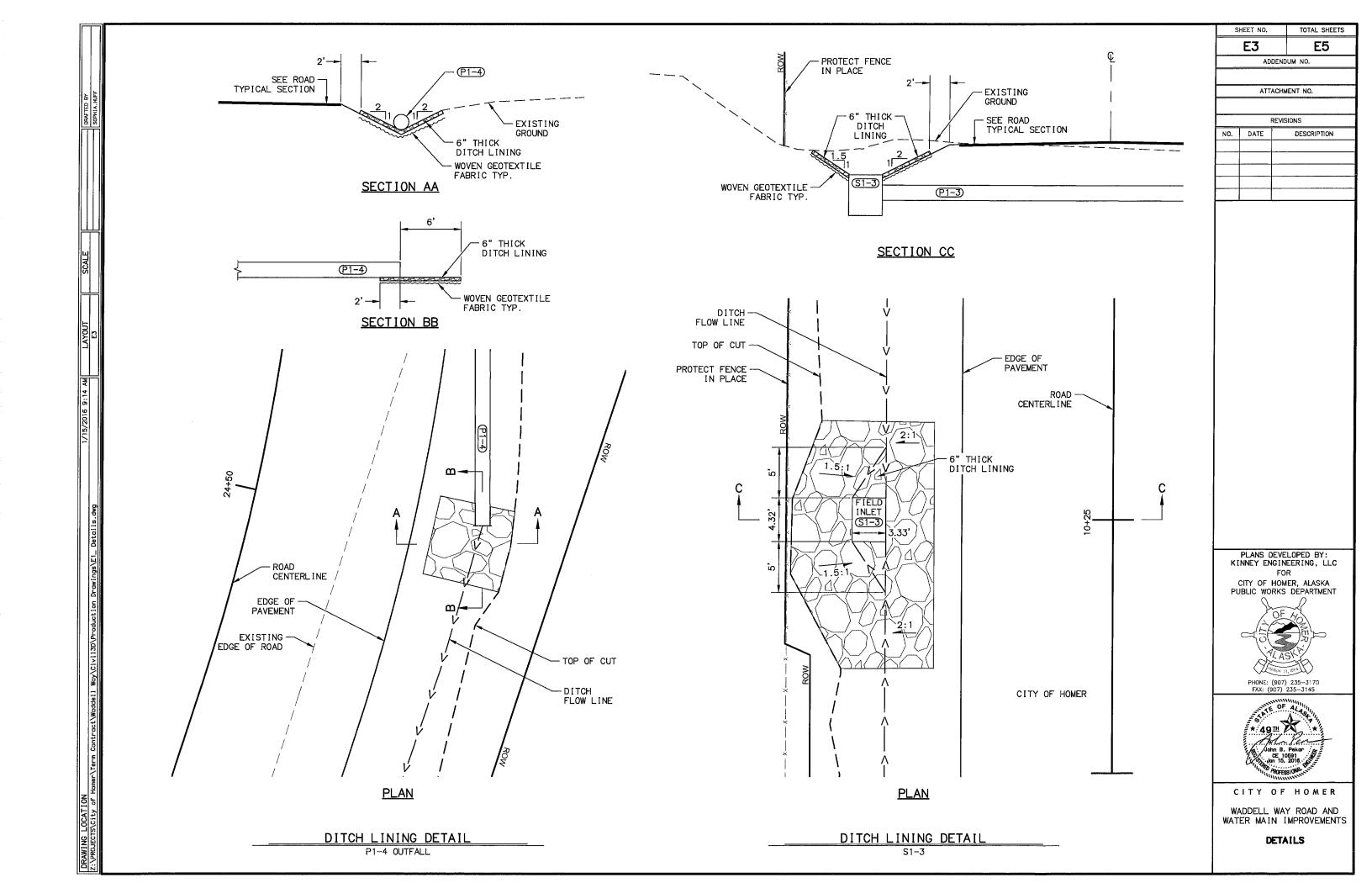


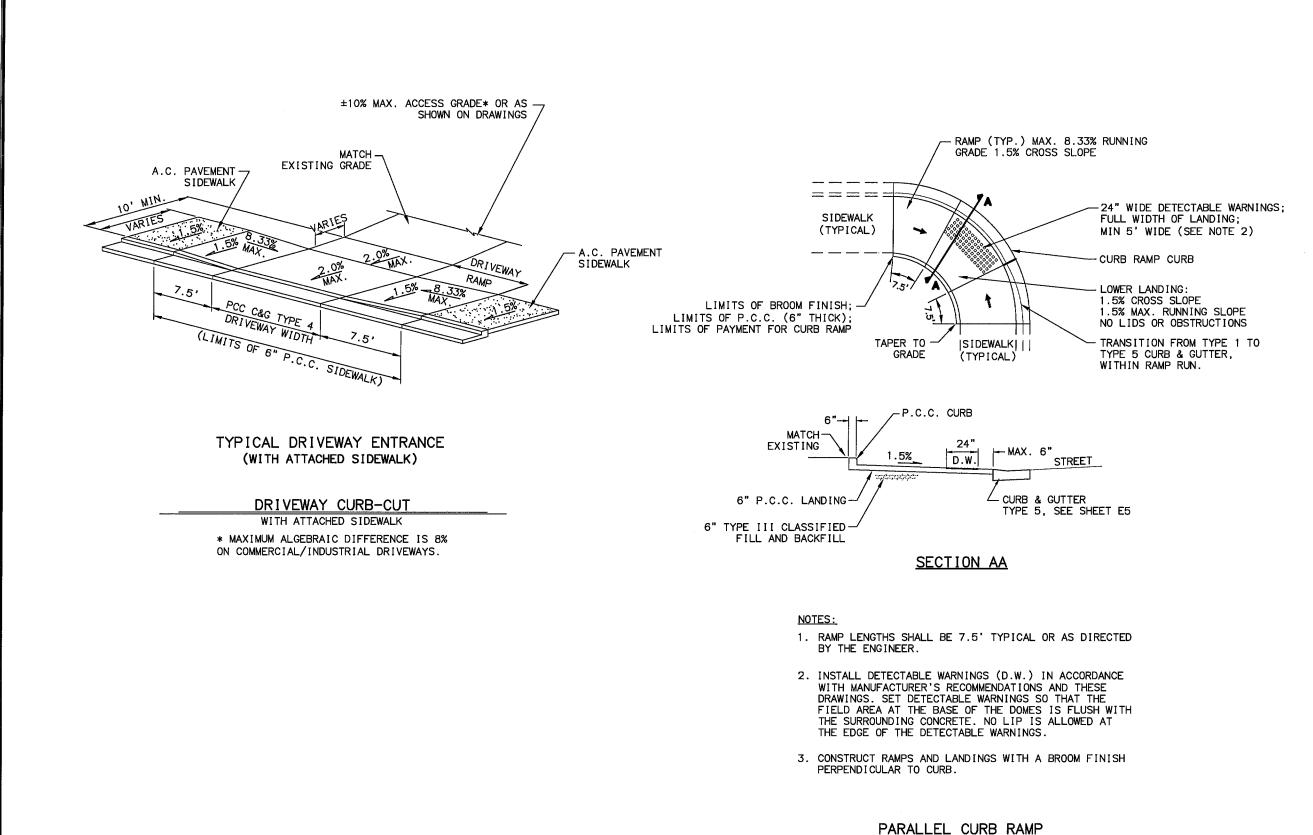
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

DETAILS

DOT TYPE "A" CONCRETE INLET BOX TYPES





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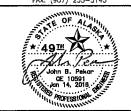
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PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR CITY OF HOMER, ALASKA



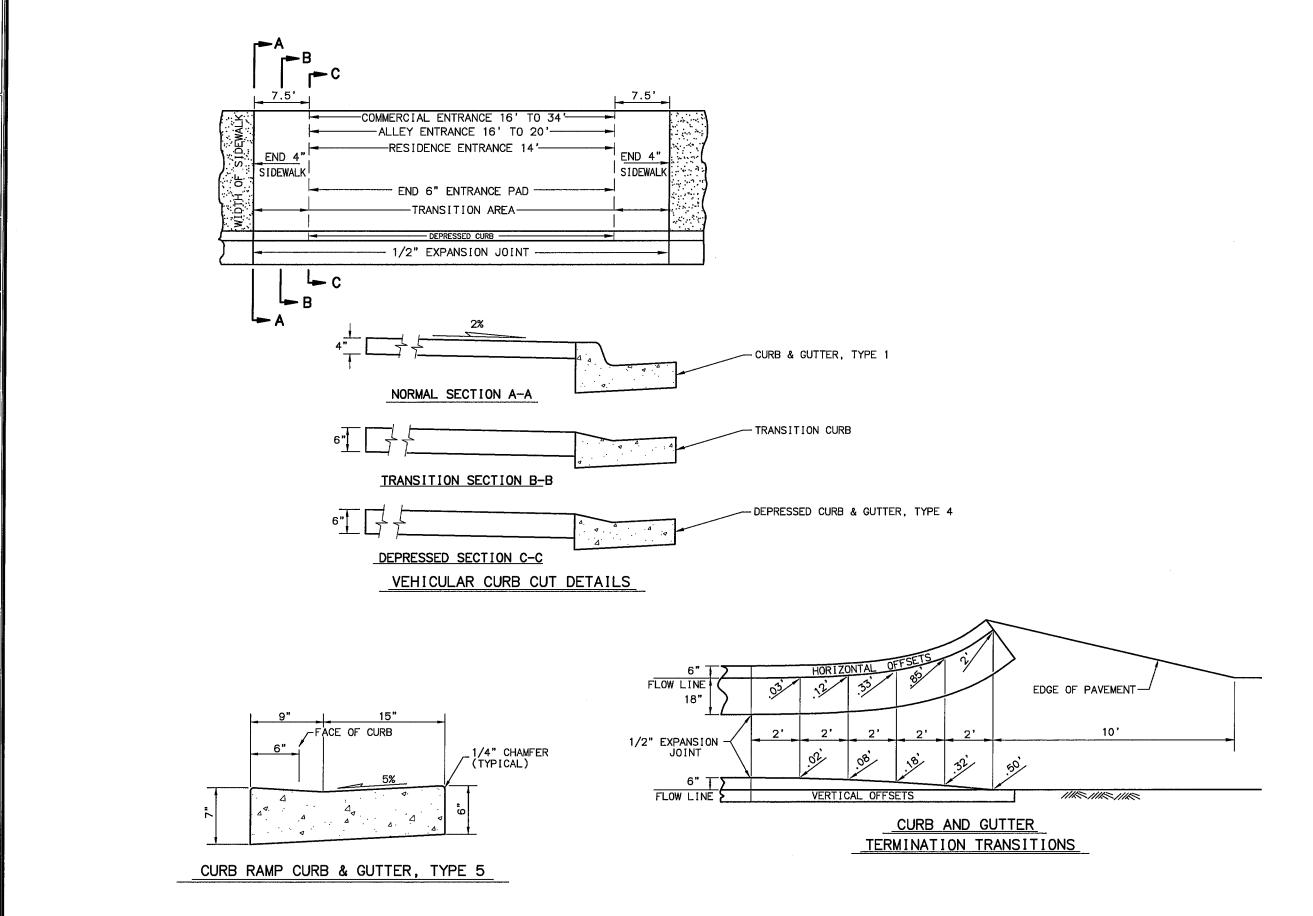
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CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

DETAILS



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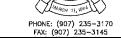
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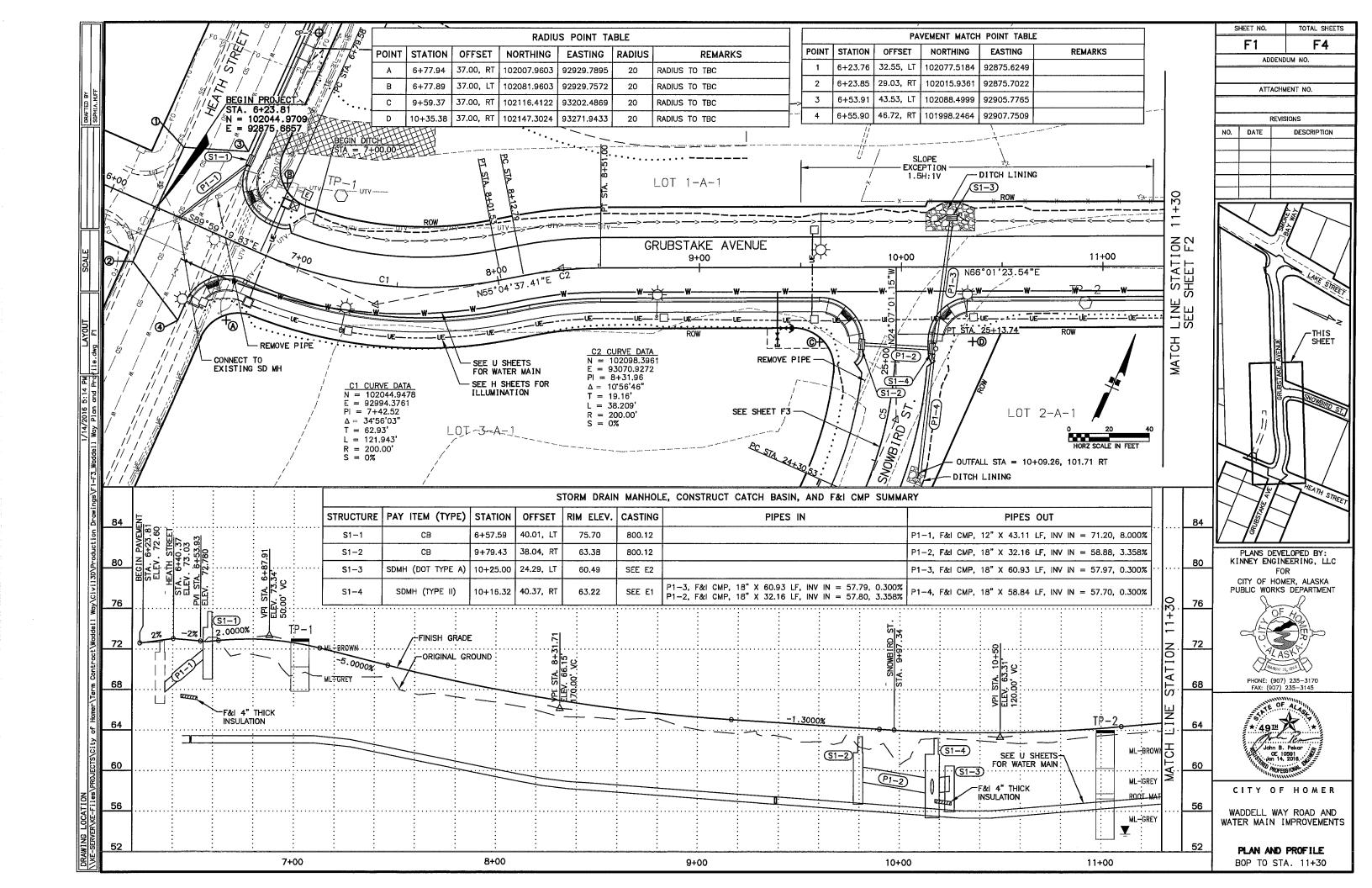


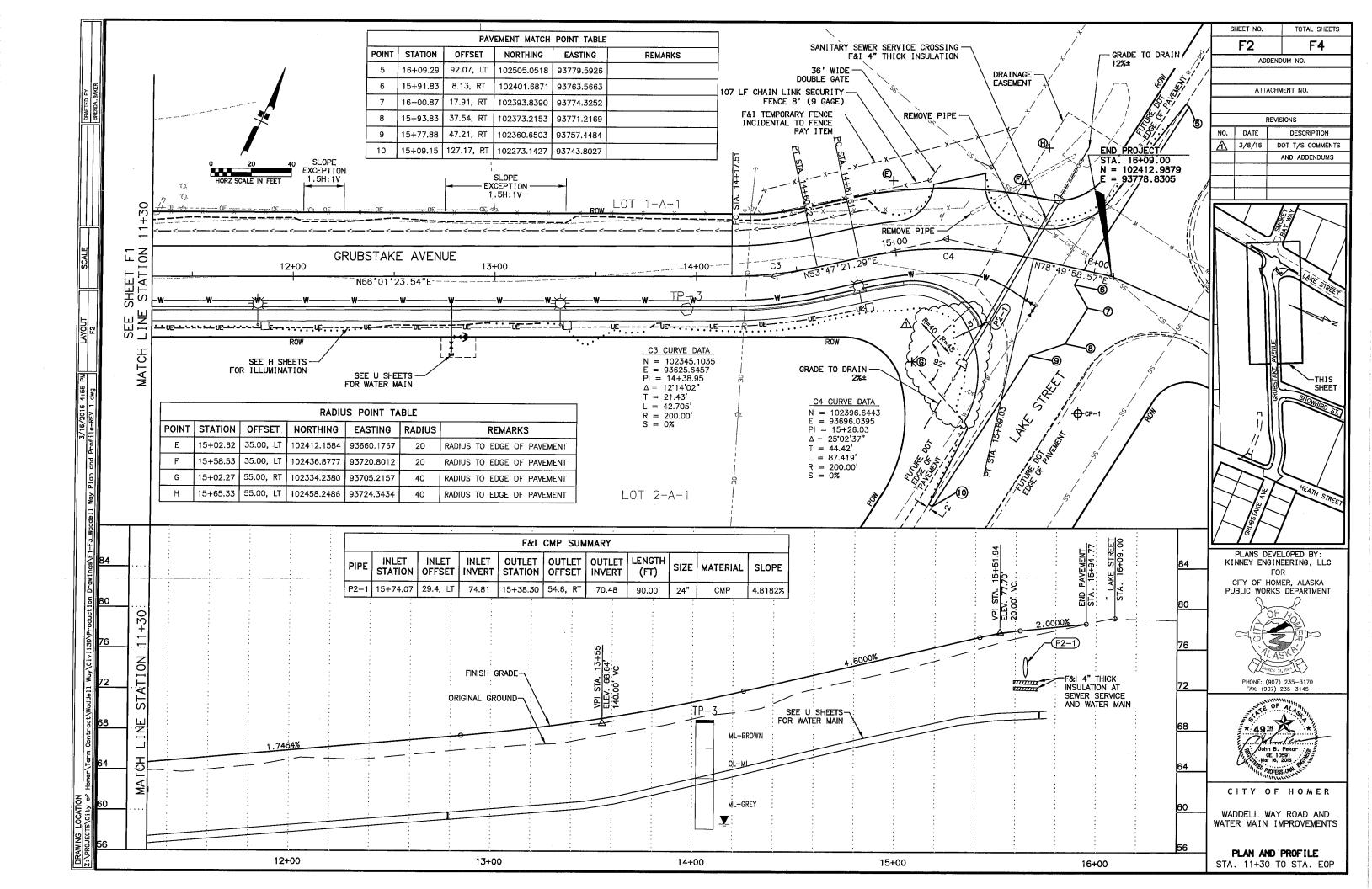


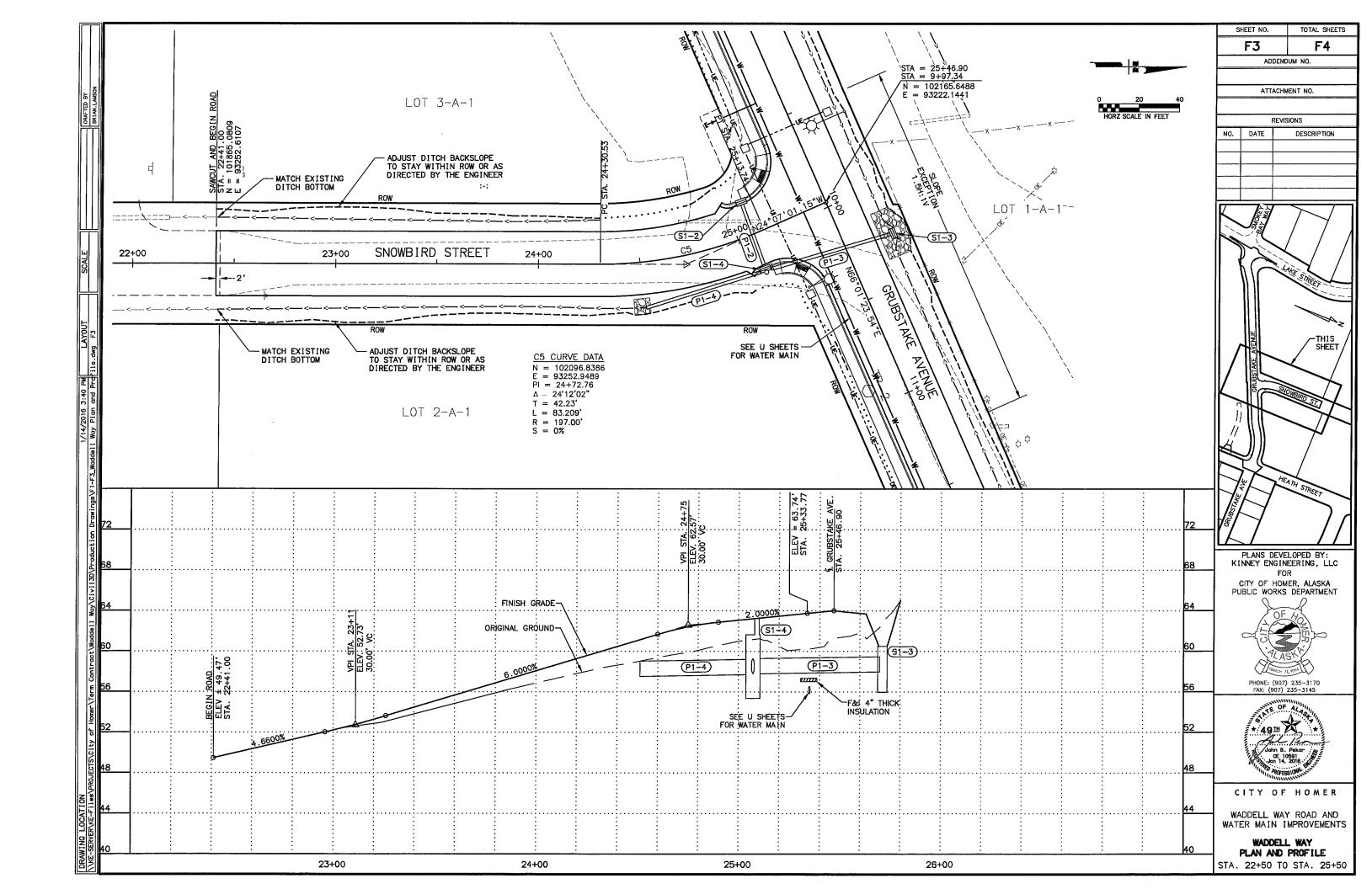
CITY OF HOMER

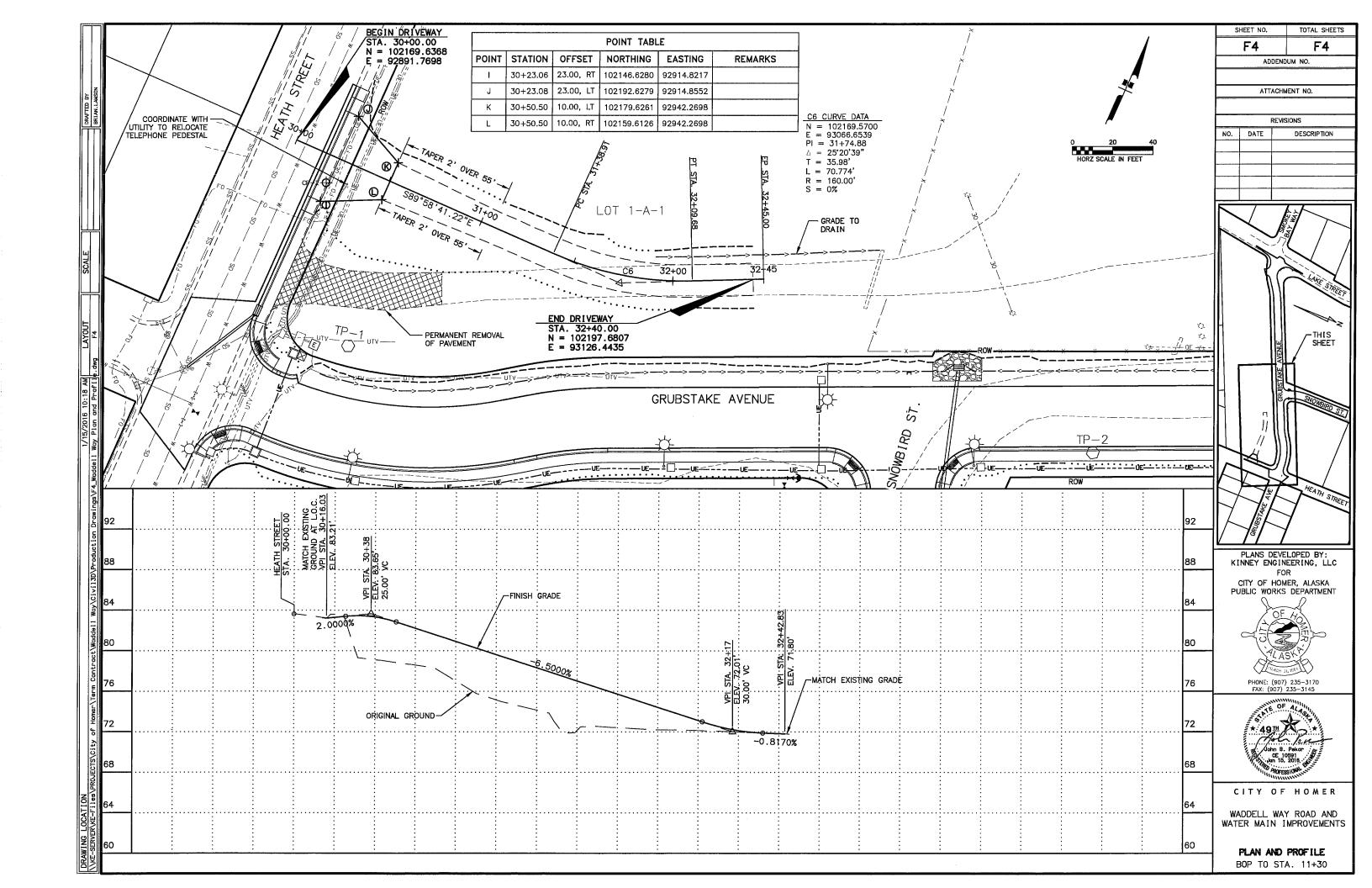
WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

DETAILS









	J
TRAFFIC MAINTENANCE NOTES:	NO. D
1. THE CONTRACTOR SHALL SUBMIT A DETAILED TRA BOTH THE COH AND ADOT&PF. THE TCP MUST I BEFORE STARTING ANY WORK.	AFFIC CONTROL PLAN (TCP) TO THE COH FOR REVIEW BY RECEIVE APPROVAL FROM BOTH THE COH AND ADOT&PF
2. PROVIDE, INSTALL, MAINTAIN, MOVE AND REMOVE ACCORDING TO COH STANDARDS, CURRENT ALAS APPROVED TRAFFIC CONTROL PLAN (TCP) SETUP	THE SPECIFIED TRAFFIC CONTROL DEVICES AND ACCESS KA TRAFFIC MANUAL, ALASKA SIGN DESIGN SPECIFICATION AND S.
3. MOUNT SIGNS SECURELY. MAINTAIN WORK SITE A	ND AFFECTED AREAS DAILY.
4. THE FINAL JUDGEMENT IN THE SELECTION NUMBE LOCATION OF ALL TRAFFIC CONTROL MEASURES	ER, AND APPLICATION OF THE TRAFFIC CONTROL DEVICES AND WILL REST WITH THE ENGINEER.
5. COVER EXISTING SIGNS WHICH CONFLICT WITH CO	DNSTRUCTION SIGNING.
6. CONSTRUCTION SIGNING SPECIFIED MAY BE ALTER TO PROTECT THE TRAVELING PUBLIC.	RED BY THE ENGINEER TO MEET CHANGING CONDITIONS AND
CLOSURE SIGNS, ADVANCE DETOUR SIGNING AND	ISED IN CONJUNCTION WITH TYPE III BARRICADES, ROAD THE FIRST TYPE II BARRICADE ENCOUNTERED BY TRAFFIC Y BURN WARNING LIGHTS SHALL BE USED IN CONJUNCTION CHANNELIZING.
8. ALL CONSTRUCTION SIGNS SHALL HAVE HIGH LEV	VEL WARNING DEVICES ATTACHED.
9. WORK ZONES MAY OVERLAP DURING CONSTRUCTI	ON UPON APPROVAL BY THE ENGINEER.
10. INTEGRATE TRAFFIC CONTROL WITH OTHER CONST	RUCTION IN THE AREA.
11. DETAILS NOT SHOWN, BUT NECESSARY TO IMPLEI ALASKA TRAFFIC MANUAL AND MUTCD.	MENT THE TRAFFIC CONTROL PLAN SHALL COMPLY WITH THE
12. ALL SPECIAL SIGNS SHALL BE BLACK ON ORANG 0.75" THICKNESS.	E BACKGROUND WITH BORDERS HAVING 1.5" RADIUS AND
13. CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCES	S.
14. PEDESTRIAN FENCE SHALL HAVE R9—9 (SIDEWALF ZONE AND AT EVERY LOCATION PEDESTRIANS ARI	C CLOSED) SIGNS MOUNTED AT BOTH ENDS OF THE WORK E LIKELY TO ENCOUNTER THE CLOSED PATHWAY.
15. INSTALL PEDESTRIAN FENCING AROUND OPEN EXC	CAVATIONS AT NIGHT. PLA
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TOTAL SHEETS

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LANS DEVELOPED BY:
HEY ENGINEERING, LLC
FOR
Y OF HOMER, ALASKA
LIC WORKS DEPARTMENT



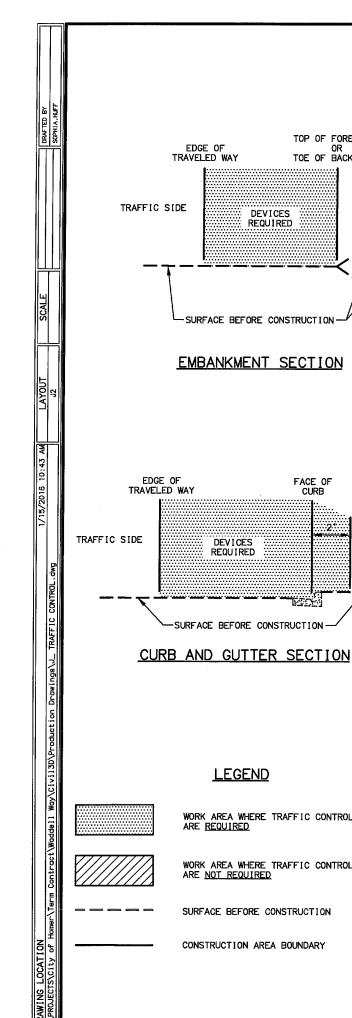
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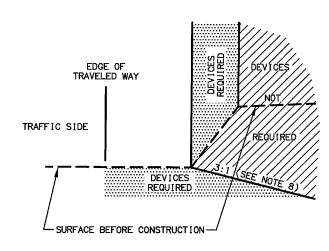


TY OF HOMER

DELL WAY ROAD AND MAIN IMPROVEMENTS

TRAFFIC CONTROL DEVICES FOR ROADSIDES





TOP OF FORESLOPE

TOE OF BACKSLOPE

EDGE OF TRAVELED WAY

DEVICES REQUIRED

SURFACE BEFORE CONSTRUCTION

EMBANKMENT SECTION

DEVICES REQUIRED

-SURFACE BEFORE CONSTRUCTION -

<u>LEGEND</u>

ARE REQUIRED

ARE NOT REQUIRED

SURFACE BEFORE CONSTRUCTION

CONSTRUCTION AREA BOUNDARY

WORK AREA WHERE TRAFFIC CONTROL DEVICES

WORK AREA WHERE TRAFFIC CONTROL DEVICES

FACE OF

CURB

BACKSLOPE SECTION

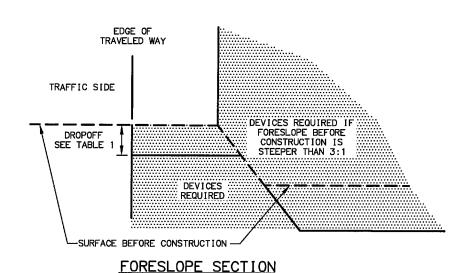


TABLE 1 TRAFFIC CONTROL DEVICES REQUIRED FOR VERTICAL DROPOFFS < 4 FFFT FROM TRAVELED WAY*

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l	ROADWAY TYPE	DROPOFF ≤ 2"	2"< DROPOFF <u>≤</u> 12"	DROPOFF ≥ 12"
	AVERAGE DAILY TRAFFIC > 4000 OR SPEED > 40 MPH	TAPER ASPHALT AT 1:1 OR _45°	TYPE II BARRICADES OR DRUMS	TEMPORARY PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL
	ALL OTHER ROADWAYS	NONE REQUIRED	TUBULAR CANDLES OR DELINEATORS	TYPE 1I BARRICADES OR DRUMS

^{*} SPACE THE DEVICES IN ACCORDANCE WITH REQUIREMENTS FOR SPACING TYPE II BARRICADES AND DRUMS SET FORTH IN THE ALASKA TRAFFIC MANUAL.

NOTES:

- TRAFFIC CONTROL DEVICES REQUIRED BY THE GUIDELINES ON THIS SHEET ARE INTENDED FOR CONDITIONS WHICH WILL BE IN PLACE LONGER THAN ONE CONTINUOUS WORK SHIFT. AN APPROVED TRAFFIC CONTROL PLAN IS REQUIRED PRIOR TO BEGINNING WORK.
- 2. THE GROUND CROSS SECTION AT A LOCATION BEFORE CONSTRUCTION DETERMINES WHETHER TRAFFIC CONTROL DEVICES ARE NEEDED AT THE SAME LOCATION DURING
- 3. GUARDRAIL EXISTING AT A LOCATION BEFORE CONSTRUCTION SHALL REMAIN IN PLACE DURING CONSTRUCTION OR APPROVED ALTERNATE DEVICES INSTALLED.
- INSTALL TRAFFIC CONTROL DEVICES BETWEEN THE EDGE OF TRAVELED WAY AND THE WORK AREA ON ANY ROADWAY OPENED TO TRAFFIC WHEN REQUIRED BY THIS
- 5. EXISTING ROADWAY ALIGNMENTS INSTALL TRAFFIC CONTROL DEVICES WHEN WORK OCCURS IN THE DEVICES REQUIRED AREAS SHOWN ON THIS DRAWING.
- 6. DETOURS, TEMPORARY ROADWAYS, OR NEW ROADWAYS NOT YET COMPLETE. INSTALL TRAFFIC CONTROL DEVICES WHEN ANY OF THE FOLLOWING CONDITIONS EXIST:
 - A. THE HORIZONTAL OR VERTICAL CURVATURE IS MORE SEVERE THAN BEFORE CONSTRUCTION BEGAN.
 - B. THE ROADWAY OR SHOULDER WIDTH IS LESS THAN BEFORE CONSTRUCTION
- C. THE BACKSLOPE OR FORESLOPE IS STEEPER THAN BEFORE CONSTRUCTION
- D. THE HEIGHT OF THE FORESLOPE IS GREATER THAN BEFORE CONSTRUCTION
- DROPOFFS:

INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE FORESLOPE SECTION DETAIL AND TABLE 1.

- 8. ON ANY NEWLY CONSTRUCTED SLOPE STEEPER THAN 4:1 TO 3:1 PROVIDE A TEN FOOT FLAT RECOVERY AREA AT THE TOE OF SLOPE OR INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE FORESLOPE SECTION DETAIL.
- 9. TRAFFIC CONTROL DEVICE REQUIREMENTS:
 - A. ON ROADWAYS WITH A SPEED LIMIT GREATER THAN 40 MILES PER HOUR OR AVERAGE DAILY TRAFFIC VOLUME GREATER THAN 4000 VEHICLES PER DAY INSTALL TEMPORARY PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL. ON MULTI-LANE ROADWAYS CLOSE THE LANE CLOSEST TO THE WORK AREA AND

TERMINATE RUNS OF TEMPORARY PORTABLE CONCRETE BARRIER USING ONE OF THE FOLLOWING THREE METHODS:

- I. TEMPORARY CRASH ATTENUATOR.
- RIGID TO SEMI-RIGID GUARDRAIL TRANSITION WITH SLOTTED RAIL TERMINAL OR OTHER APPROVED CRASHWORTHY END TREATMENT.
- III. FLARE THE ENDS OF THE TEMPORARY BARRIER AWAY FROM THE ROADWAY AT A RATE OF 15:1 ON A TRANSVERSE SLOPE OF 10:1 OR FLATTER TO THE OUTSIDE EDGE OF THE CLEAR ZONE AND INSTALL A SLOPING END TREATMENT, PER STANDARD DRAWING G-46.11.

TERMINATE RUNS OF TEMPORARY GUARDRAIL USING EITHER OF THE FOLLOWING

- SLOTTED RAIL TERMINAL OR OTHER APPROVED CRASHWORTHY END
- FLARE THE ENDS OF THE TEMPORARY GUARDRAIL AWAY FROM THE ROADWAY AT A RATE OF 15:1 ON TRANSVERSE SLOPE OF 10:1 OR FLATTER TO THE OUTSIDE EDGE OF THE CLEAR ZONE.
- B. ON ALL OTHER ROADWAYS INSTALL TYPE II BARRICADES, DRUMS OR DELINEATORS WHEN DEVICES ARE REQUIRED. SPACE THE DEVICES IN ACCORDANCE WITH THE REQUIREMENTS FOR SPACING TYPE II BARRICADES AND DRUMS SET FORTH IN THE ALASKA TRAFFIC MANUAL.
- 10. DO NOT CONSTRUCT VERTICAL DROP OFFS GREATER THAN 1.5" WITHIN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK. PROVIDE 2' OF SHY DISTANCE FROM EDGE OF ALL TRAFFIC CONTROL DEVICES TO THE EDGE OF THE TRAVELED WAY.

ATTAC	HMENT NO.
RE	VISIONS

TOTAL SHEETS

J2

SHEET NO.

J2

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170 FAX: (907) 235-3145



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

TRAFFIC CONTROL DEVICES FOR ROADSIDES

##	TYPE III JUNCTION BOX
	ELECTROLIER*
·	LIGHTING CONDUIT
*	CONDUIT CALLOUT
	SIGN POST & NUMBER
OLD .	PRIVATE SIGN
PAVEMENT MA	ARKING LEGEND
PROPOSED	
	PROJECT CENTERLINE
8"W	8" WHITE SOLID STRIPE
4"W	. 4" WHITE SOLID STRIPE
4"W SKIP	4" WHITE SKIP STRIPE 10' STRIPES AND 30' SPACES
8"W GUIDE SKIP	8" WHITE LANE GUIDE SKIP LANE CONTINUATION OR TURN SKIP 1' STRIPES AND 3' SPACES
8"Y	8" YELLOW SOLID STRIPE
4"Y	4° YELLOW SOLID STRIPE
4"Y SKIP	4" YELLOW SKIP STRIPE 10' STRIPES AND 30' SPACES
+20	STRIPING CHANGE STATION INTERVAL
24"W (TYP)	2' CROSSWALK OR STOPBAR
	LADDER CROSSWALK LAYOUT 2' WIDE RUNGS WITH 2' SPACES ALIGNED TD AVOID TIRE PATHS
12' 3" APART 18"Y @ 45"	TYPICAL PAINTED MEDIAN
CONDUIT SIZE NUMBER OF CABLES REQ NUMBER OF INSULATED PAIRS(PR), IF OTHER CONDUCTOR SIZE IN AW 1-3C4 CKT BA3 END OF CIRCUIT SYMBO (ROTATE TO POINT IN DIRECT	CONDUCTORS(C) OR THEN SINGLE CONDUCTOR G

SYMBOL LEGEND

LOAD CENTER

TYPE 1A JUNCTION BOX

TYPE II JUNCTION BOX

PROPOSED

 \boxtimes

##

##

EXISTING

 \boxtimes

##

##

3* '

ABBREVIATIONS

G - CENTERLINE TC - TRAFFIC CONTROLLER SIG - SERVICE TO CONTROLLER P1 - TRAFFIC SIGNAL POLE # INTX - INTERSECTION PEC - PHOTOELECTRIC CELL INTX L - INTERSECTION LIGHTING YAGI - DIRECTIONAL ANTENNA LTG - LIGHTING OMNI - OMNI DIRECTIONAL ANTENNA PRE 2 - PREEMPTION # HEAD - VEHICULAR SIGNAL HEAD PRE CON 2 - PREEMPTION CONTROLLER # PED B 28 - PEDESTRIAN PUSH BUTTON # EB - EAST BOUND PEDI - PEDESTRIAN SIGNAL HEAD LC - LOAD CENTER

RMC - RIGID METAL CONDUIT PE - POLYETHYLENE CONDUIT LFNC - LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT AWG - AMERICAN WIRE GAUGE NB - NORTH 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, AND ARE ON THE DOWNSTREAM TRAFFIC SIDE OF POLE.
- 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.
- 5. TOPSOIL AND SEED ANY DISTURBED AREAS.

SIGNING & STRIPING NOTES:

- 1. ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 2. USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
 A. PT MEANS A PERFORATED STEEL TUBE.

 - B. T MEANS A SQUARE STEEL TUBE.
 - C. P MEANS A ROUND STEEL PIPE.
 - D. W MEANS A WIDE FLANGE BEAM.
 - E. POPL MEANS A POLE PLATE INSTALLED PER ITS STANDARD DRAWING S-23
- 3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE.
- 4. FOR SIGNS SUPPORTED BY MULTIPLE POSTS, FABRICATE THE POSTS WITH THEIR TOPS LEVEL WITH ONE ANOTHER.
- 5. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD DRAWING. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
- 6. FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE TECHNICAL SPECIFICATIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.
- 7. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
- 8. FOR SIGNS SUPPORTED BY MULTIPLE TUBES OR PIPES, LOCATE THE OUTER POSTS ON MAXIMUM SIX FEET CENTERS. INSTALL ADJACENT WIDE FLANGE POSTS ON MINIMUM EIGHT FEET CENTERS.
- 9. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER. UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
- 10. FOR ALL FINAL PAVEMENT MARKINGS USE GROOVED-IN METHYL METHACRYLATE (MMA), 125 MILS THICK.
- 11. DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT.
- 12. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.
- 13. WHERE NEW STRIPING IS TO EXTEND BEYOND PAVING LIMITS, REMOVE EXISTING STRIPING, TO THE EXTENT OF STRIPING LIMITS.

ATTACHMENT NO. **REVISIONS** DESCRIPTION ND. DATE

ADDENDUM NO

TOTAL SHEETS

H12

SHEET NO.

H1

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

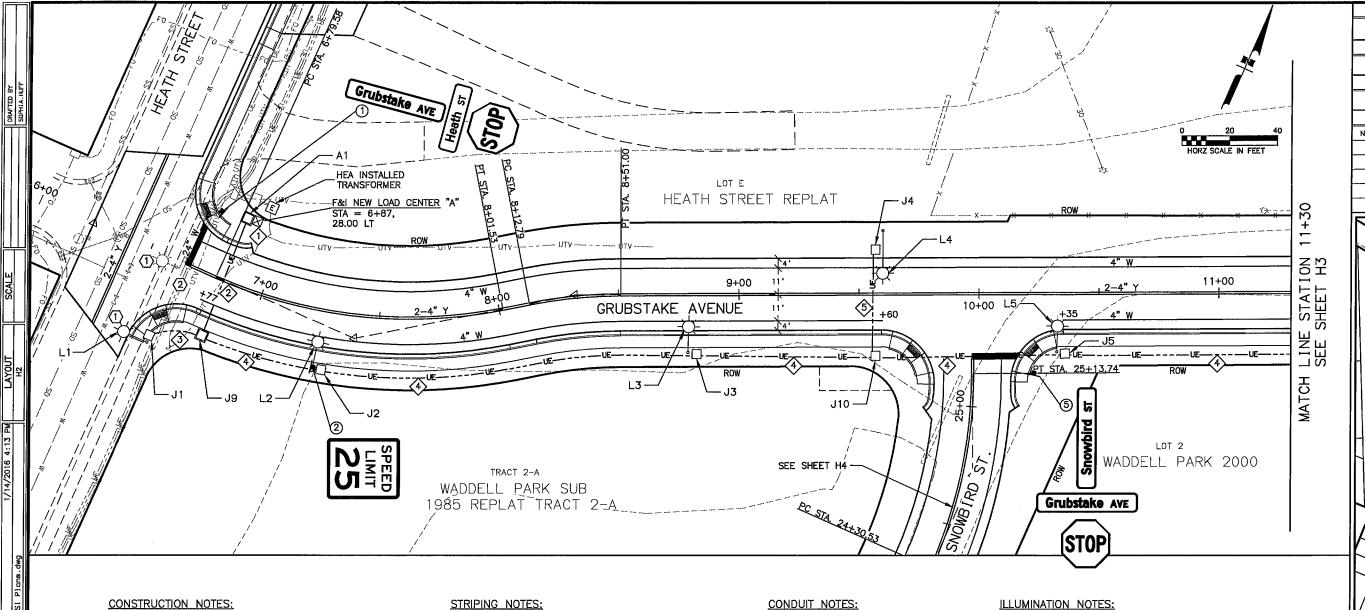
TRAFFIC LEGEND AND NOTES

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



- (1) RELOCATE EXISTING STEEL LIGHT POLE, MAST ARM, AND LUMINAIRE TO NEW PILE FOUNDATION. REMOVE EXISTING CONCRETE FOUNDATION AND JUNCTION BOX, EXISTING SERVING LOAD CENTER IS LOCATED AT KLONDIKE AVE.
- (2) REMOVE CONDUCTORS RUNNING NORTH TO NEXT J-BOX (≈ 122'). ABANDON OR REMOVE EXISTING CONDUIT AS NECESSARY TO CONSTRUCT ROADWAY IMPROVEMENTS.

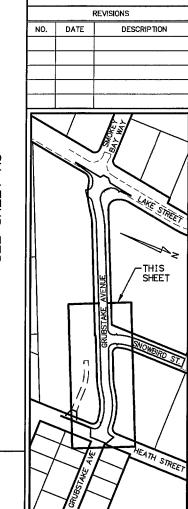
DISTANCES SHOWN ARE TO CENTER OF SINGLE STRIPE, TO CENTER OF PAIR OF STRIPES, OR TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.

SIGNING NOTES:

1. # - SIGN POST NUMBER REFERS TO SIGN POST NUMBER NOTES IN THE SIGN SUMMARY TABLES, SHEET H5.

- 2-3c#8 (LTG A1, A2), 1-1c#8 GND
- 2-3c#8 (LTG A1, A2), 1-1c#8 GND 3-4" HDPE (SPARE)
- 3 2" HDPE 1-3c#8 (LTG A2), 1-1c#8 GND
- 4 2" HDPE 1-3c#8 (LTG A1), 1-1c#8 GND
- \$\frac{2" \text{ HDPE}}{2-3c\#8 \text{ (LTG A1),}} 1-1c#8 GND

- 1. CONTRACTOR SHALL DECREASE CONDUIT BURIAL DEPTH FROM 30" TO 18" WHEN CROSSING OVER SHALLOW UG UTILITIES LOCATED BEHIND THE CURB & GUTTER AND OUT OF THE ROADWAY.
- 2. THE CIRCUITRY BETWEEN AN ELECTROLIER AND THE JUNCTION BOX SERVING IT SHALL CONSIST OF 1-3c #8 CABLE IN AND OUT (2-3c #8), AND 1-1c #8 BARE CU IN A 2" RMC.
- 3. CONTRACTOR SHALL CONTAIN ALL IMPROVEMENTS WITHIN THE R.O.W. CONTRACTOR SHALL VERIFY IMPROVEMENT LOCATIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING.
- 4. CONTRACTOR SHALL STAKE LUMINAIRE POLE LOCATIONS AND BASE PLATE ELEVATIONS FOR THE ENGINEER'S APPROVAL PRIOR TO LUMINAIRE FOUNDATION INSTALLATION.



SHEET NO.

H2

ADDENDUM NO.

ATTACHMENT NO.

TOTAL SHEETS H12

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



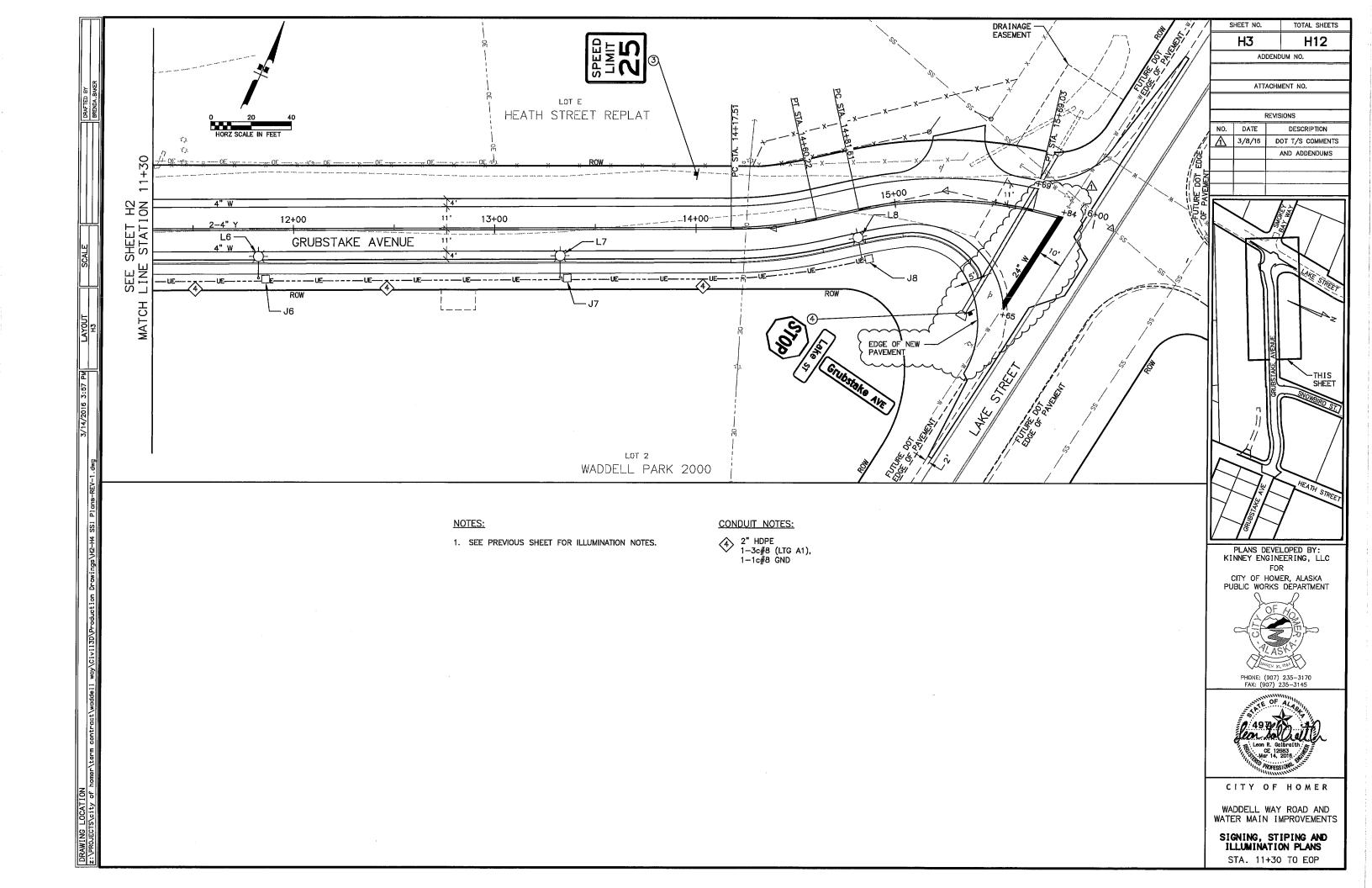
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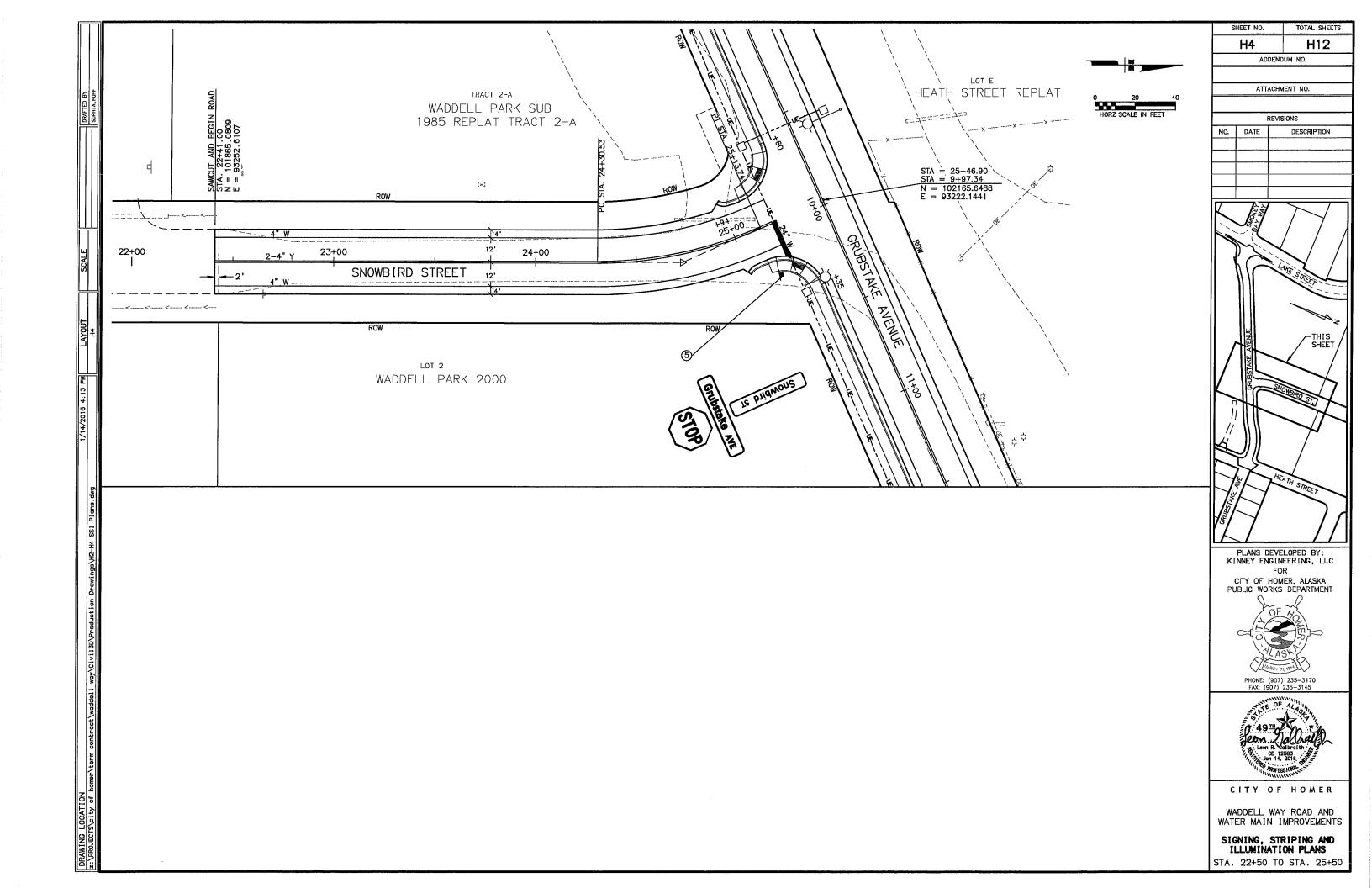


CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

SIGNING, STRIPING AND ILLUMINATION PLANS BOP TO STA. 11+30





		1				SIGN :	<u>SUMM</u>	ARY	T	T	· · · · · · · · · · · · · · · · · · ·		
		LOCATI	LOCATION			SIZE (FT)				POSTS	THICKN	ESS (in)	
SHEET NO.	SIGN NO.	STATION	OFFSET	TYPE	LEGEND	WIDTH	HEIGHT	AREA SQ FT	SIGN FACES		FRAMED		REMARKS
		SIATION	OTTSET			WIDIN	HEIGHT			& TYPE	YES	NO	
				D3-1D	Grubstake AVE	3.50	0.67	2.345	N/S	1-2.5" PT	0.125		MOUNT TWO SIGNS BACK TO BACK
H2	1	6+70.65	L T	D3-1D	Heath st	2.50	0.67	1.675	E/W			0.125	
				R1-1	STOP	2.50	2.50	6.250	E			0.125	
H2	2	7+26.41	RT	R2-1	SPEED LIMIT 25	2.50	3.00	7.500	w	1-2.5 PT		0.125	
Н3	3	14+00.00	LT	R2-1	SPEED LIMIT 25	2.50	3.00	7.500	E	1-2.5 PT		0.125	
		~~~~		D3-1D	Grubstake AVE	3.50	0.67	2.345	N/S	1-2.5 PT	0.125		MOUNT TWO SIGNS BACK TO BACK
Н3	4	15+42.62	RT	D3-1D	Lake st	2.50	0.67	1.675	E/W			0.125	
		A		R1-1	STOP	2.50	2.50	6.250	w			0.125	
				D3-1D	Snowbird st	3.50	0.67	2.345	E/W	1-2.5 PT	0.125		MOUNT TWO SIGNS BACK TO BACK
H4	5	10+22.88	RT	D3-1D	Grubstake AVE	3.50	0.67	2.345	N/S			0.125	
				R1-1	STOP	2.50	2.50	6.250	s			0.125	
			4.			TOTAL SIG	N AREA:	46.48 SF					

	HEET NO.		TOTAL SHEETS
	H5		H12
	ADD	ENDU	M NO.
			-
	ATTA	CHME	NT NO.
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NO.	DATE		DESCRIPTION
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Δ	3/8/16	DO:	T T/S COMMENTS

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC
FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170 FAX: (907) 235-3145



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS SIGN SUMMARY

					ROADWAY E	ELECTROLIEF	R SUMM	MARY		
LUMINAIRE		OFFSE	T	MOUNTING	MAST ARM	LAMP SIZE	LAMP	IES		
NO.	STATION	DISTANCE	RT/LT	HEIGHT	LENGTH	(WATTS)	TYPE	DISTRIBUTION	CIRCUIT	REMARKS
L1	6+64.44	36.33	RT	EXISTING	EXISTING	EXISTING			A-A2	RELOCATE EX. POLE TO NEW FOUND.
L2	7+26.41	24.01	RT	24'	8'	135	LED	MC-III	A-A1	
L3	8+78.96	24.00	RT	24'	8'	135	LED	MC-III	A-A1	
L4	9+59.93	26.32	LT	24'	15'	135	LED	MC-III	A-A1	
L5	10+32.55	24.22	RT	24'	8'	135	LED	MC-III	A-A1	
L6	11+82.55	24.00	RT	24'	8'	135	LED	MC-III	A-A1	
L7	13+32.55	24.00	RT	24'	8'	135	LED	MCIII	A-A1	
L8	14+78.19	24.00	RT	24'	8'	135	LED	MC-III	A-A1	

#### **ELECTROLIER NOTES:**

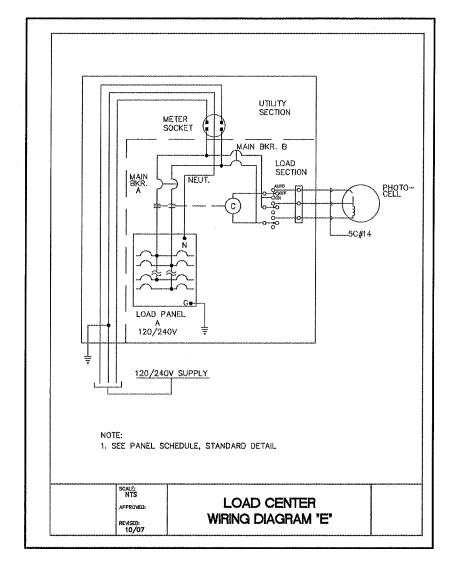
- 1. MOUNTING HEIGHT REFERS TO HEIGHT OF A LUMINAIRE ABOVE THE POINT ON THE ROADWAY DIRECTLY
- 2. UNLESS OTHERWISE NOTED, ALL ROADWAY LUMINAIRE POLES SHALL BE MOUNTED ON DRIVEN PILE FOUNDATIONS.
- 3. CONTRACTOR SHALL VERIFY UNDERGROUND UTILITIES AND ADJUST FOUNDATION LOCATION, IF CONFLICT EXISTS.
- 4. CONTRACTOR SHALL ENSURE THAT FOUNDATION BOLT CIRCLE MATCHES LUMINAIRE POLE BASE. ROADWAY LUMINAIRE POLES SHALL BE FABRICATED TO THE DETAILS IN THESE PLANS.
- 5. AN ELECTROLIER CONSISTS OF A LUMINAIRE POLE, MAST ARM, AND LUMINAIRE.
- 6. J-BOXES, ELECTROLIERS, AND LED LUMINAIRES SHALL CONFORM TO DETAILS AND SPECIFICATIONS (DIVISION 8000) IN THIS PLAN SET.

DESIGN CRITERIA FOR ROADWAY LUMINAIRES	
LUMINAIRE CRITERIA	VALUE
ARRANGEMENT	1 SIDE
ROAD WIDTH	30'
MOUNTING HEIGHT	24'
SPACING	152'
LUMINAIRE OVERHANG*	0.5'
FIXTURE LUMEN OUTPUT	10,430
UNIFORMITY RATIO AVE/MIN (MAX)	6.0
AVE ILLUMINANCE (MIN.)	0.7 FC
	1

* LUMINAIRE OVERHANG IS THE HORIZONTAL DISTANCE BETWEEN THE LUMINAIRE AND THE FACE OF THE CURB. A POSITIVE VALUE INDICATES THE LUMINAIRE IS ON THE ROAD SIDE OF THE CURB.

#### LIGHTING CERTIFICATION STATEMENT:

SIGNED STAMP ON THIS DRAWING INDICATES THAT THE LIGHTING DESIGN FOR THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE GUIDELINES SET FORTH IN CHAPTER 5 OF THE 2007 MOA DESIGN CRITERIA MANUAL, AND IESNA RP-8-00.



JUNCTION BOX		OFFSE	7		
NO.	STATION	DISTANCE	RT/LT	TYPE	REMARKS
J1	6+64.02	33,28	RT	1A	
J2	7+29.64	24.48	RT	1A	
J3	8+82.48	24.68	RT	1A	
J4	9+56.75	18.48	LT	1A	
J5	10+35.95	24.93	RT	1A	
J6	11+86.13	24.50	RT	1A	
J7	13+36.16	24.37	RT	1A	
J8	14+81.59	24.90	RT	1A	
J9	6+83.64	24.46	RT	//	
J10	9+56.88	25.71	RT	1A	
A1	6+82.04	27.63	LT	//	INSTALL ADJACENT TO NEW LOAD CENTER "A"

SERVICE:         SINGLE PHASE, 3 WIRE, 120/240VAC 100A         SOCKET REQ'D. YES           LOAD         MAIN BREAKERS         CONTACTORS         REMARKS           PANEL A 240V         2P         100A         240V         2P         100A           PE CNTRL 240V         2P         15A         SPACE         NOTE 8         2P         100AF         VOLT SECONDARY         KVA 60 HERTZ           TRANSFORMER: NONE VOLT PRIMARY WITH VOLT SECONDARY         VOLT SECONDARY         KVA 60 HERTZ         VOLT SECONDARY         KVA 60 HERTZ           PANEL "A" RATING: 10.000 AIC, 16 SPACE         16 SPACE         120/240 VAC 1-PHASE, 3 WIRE, 100A BUS         KVA AMPS POLE         KVA AMPS POLE           CKT#         DESCRIPTION         KVA AMPS POLE         KVA AMPS POLE         KVA AMPS POLE           A-A1 L2-L8 (NEW)         1.0 20 2         2         KVA AMPS POLE           A-A2 EXISTING LIGHT         0.3 20 2         2         C	LOAD CEN	TER LOCA	4 <i>TION: 6+</i>	86.97,	28' LT.	SOL	<b>URCE</b>	LOCA	TION: HE	A TRAI	<i>VSFORM</i>	ER		 
PANEL A         240V         2P         100A         240V         2P         100A           PE CNTRL         240V         2P         15A         IOAB         IO	SERVICE:	SINGLE I	PHASE, 3	WIRE,	120/240	VAC	100A		SOCKE	REQ'L	). YES			
PE CNTRL         240V         2P         15A           SPACE         NOTE 8         2P         100AF           TRANSFORMER:         NONE_VOLT_PRIMARY_WITH	LOAD	MAI	N BREAK	ERS	C	ONTAC	TORS			- 1	REMARK	S		
SPACE         NOTE 8         2P         100AF           TRANSFORMER: _NONE _ VOLT _ PRIMARY _ WITH _ VOLT _ SECONDARY KVA _ 60 _ HERTZ _ PANEL _ "A" _ RATING: _ 10,000 _ AIC, _ 16 _ SPACE _ 120/240 _ VAC _ 1-PHASE, _ 3 _ WRE, _ 100A _ BUS _ LOAD _ PANEL _ "A" _ LOAD _ BREAKER _ DESCRIPTION _ KVA _ AMPS _ POLE _ CKT# LOAD _ BREAKER _ A-AI _ L2-L8 _ (NEW) 1.0 _ 20 _ 2	PANEL A	240V	2P	100A	240V	2P	1	100A						
TRANSFORMER: NONE VOLT PRIMARY WITH VOLT SECONDARY KVA 60 HERTZ  PANEL "A" RATING: 10.000 AIC, 16 SPACE  120/240 VAC 1PHASE, 3 WRE, 100A BUS  CKT# DESCRIPTION KVA AMPS POLE  A-A1 L2-L8 (NEW) 1.0 20 2  A-A2 EXISTING LIGHT 0.3 20 2	PE CNTRL	240V	2P	15A								,		
PANEL "A" RATING: 10.000 AIC, 16 SPACE         120/240 VAC 1-PHASE, 3 WRE, 100A BUS         CKT# DESCRIPTION KVA AMPS POLE         A-A1 L2-L8 (NEW)       1.0 20 2         A-A2 EXISTING LIGHT       0.3 20 2    LOAD BREAKER CKT# KVA AMPS POLE	SPACE	NOTE 8	2P	100AF										
LOAD PANEL "A"   LOAD BREAKER   CKT#   LOAD BREAKER   KVA AMPS POLE	TRANSFOR	MED. NO	NE VOLT	DDIMAI	NA 148774	<u> </u>	1 /OL T	0500						
I – A2 EXISTING LIGHT 0.3 20 2	PANEL "A"	' RATING:	<u>10,000</u>	AIC,	16 5	PACE	VOLI	SECO	NDARY .		KVA 6	O HEI	RIZ	 
	PANEL "A' 120/240 \	' RATING: 'AC 1-F AD PANEL	<u>10,000</u> PHASE, 3 . "A"	AIC, WIRE, LO	16 S 100A BU AD BRE,	SPACE S AKER			INDARY .		KVA 6	O HEI	LOAD	 
A-A3 SPARE 0.0 20 2	PANEL "A' 120/240 \ CKT#	' RATING: 'AC 1F AD PANEL DESCRI	<u>10,000</u> PHASE, 3 . "A"	AIC, WIRE, LO, KV,	16 S 100A BU AD BRE, A AMPS	SPACE S AKER POLE			INDARY .		KVA 6	O HEI	LOAD	 
	PANEL "A' 120/240 \ CKT# LOA N-A1 L2-L	' RATING: VAC 1—F ND PANEL DESCRI 8 (NEW)	10,000 PHASE, 3 . "A" PTION	AIC, WIRE, LO, KV,	16 S 100A BU AD BRE A AMPS D 20	SPACE S AKER POLE 2			INDARY .		KVA 6	O HEI	LOAD	 

- CONNECTED LOAD 1.4 KVA 5.8 AMPS; NEC DEMAND LOAD 1.8 KVA 7.5 AMPS
- PROVIDE LAMINATED LABELS, 1/4" BLACK LETTERS ON WHITE BACKGROUND, TO IDENTIFY LOAD AND DEVICE TAG AS APPLICABLE.
- PROVIDE CONTACTORS WITH 240V COILS, 0.1 KVA LOAD INCLUDED.
- 4. MOUNT HOA SWITCHES ON DEAD-FRONT COVER, WIRED FOR PE CONTROL IN AUTOMATIC POSITION.
- MOUNT PHOTOCELL ON LOAD CENTER.
- LOAD CENTER SHALL CONFORM TO DIVISION 8000 SPECIFICATIONS.
- CONTRACTOR SHALL CONFORM PROPOSED POWER SUPPLY CAPACITY PROVIDED BY UTILITY AND SUBMIT DATA TO ENGINEER FOR REVIEW. PROVIDE DURABLE FIELD MARKING AT SERVICE EQUIPMENT PER NEC 110.24 AS FOLLOWS: AVAILABLE FAULT CURRENT: 8,680 AMPS, BASED ON 25kVA 1-PH SUPPLY TRANSFORMER. DATE: 10/30/2015".
- B. PROVIDE 2P SPACE FOR FUTURE 100A-FRAME SIZE MAIN BREAKER.

#### LOAD CENTER SERVICE NOTES:

1. CITY OF HOMER SHALL MAKE APPLICATION FOR SERVICE AND PAY FOR ENGINEERING AND APPLICATION FEES. CONTRACTOR SHALL PROVIDE POST MOUNTED LOAD CENTER AND METER BASE AND COORDINATE WITH HEA TO ENERGIZE.

ATTACHMENT NO. REVISIONS NO. DATE

ADDENDUM NO.

TOTAL SHEETS

H12

SHEET NO.

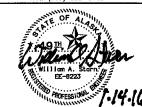
H6

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



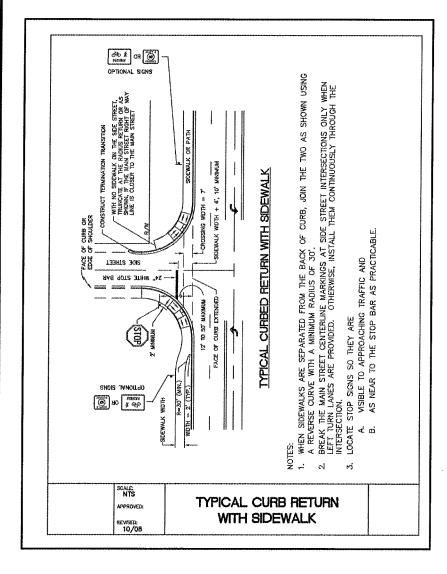
PHONE: (907) 235-3170 FAX: (907) 235-3145

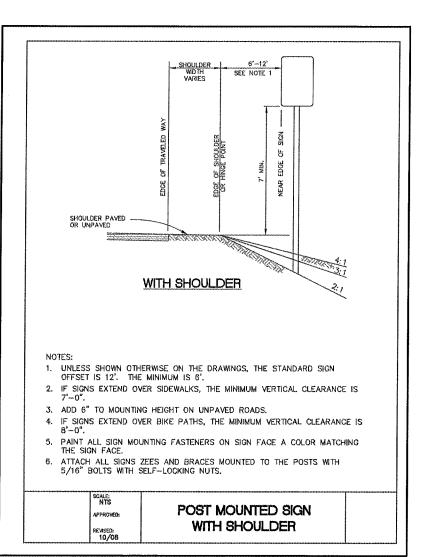


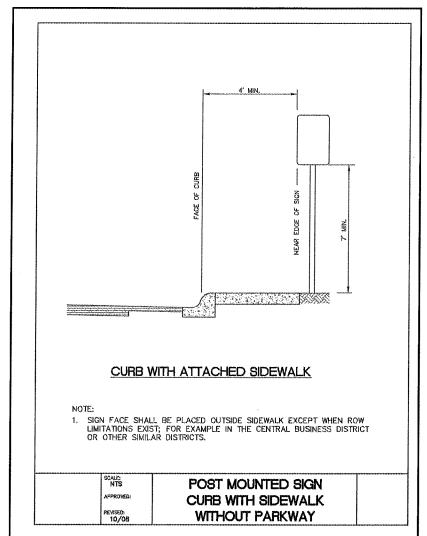
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

ILLUMINATION SUMMARIES







SHEET NO. TOTAL SHEETS

H7 H12

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO. DATE DESCRIPTION

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



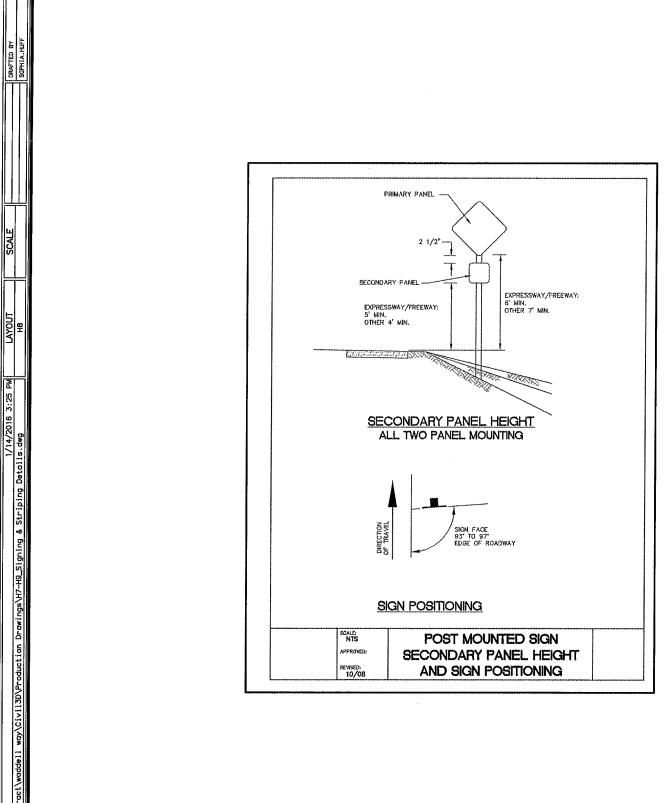
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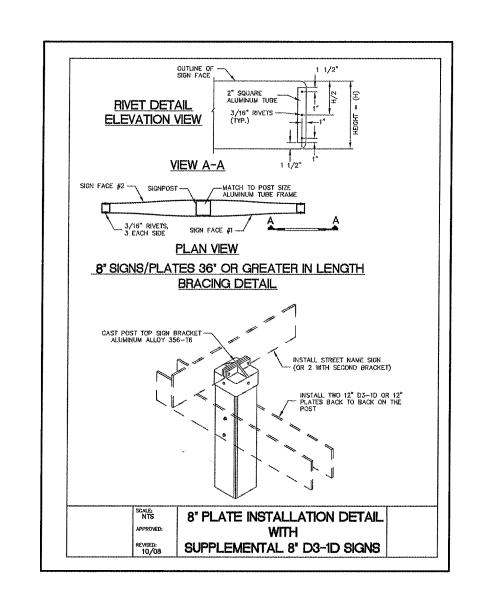


CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

SIGN DETAILS





H8 H12

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO. DATE DESCRIPTION

TOTAL SHEETS

SHEET NO.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



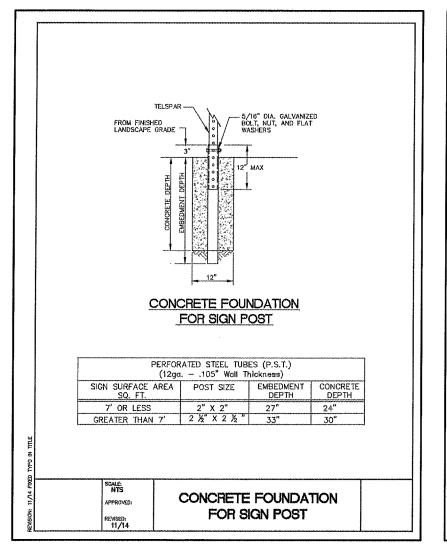
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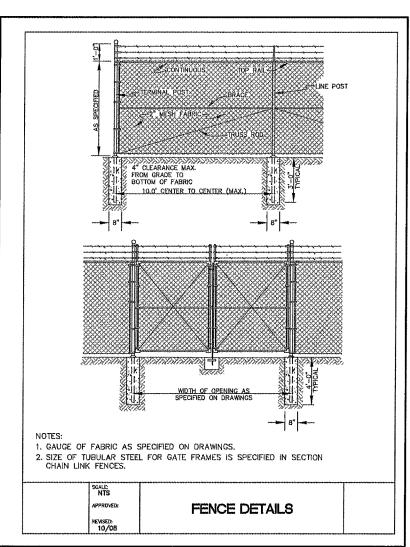


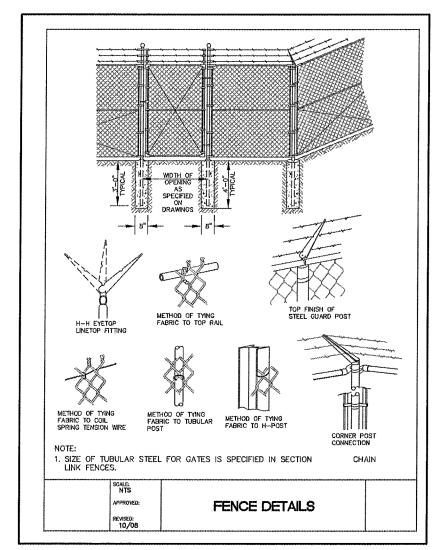
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

SIGN DETAILS







H9 H12

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

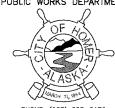
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TOTAL SHEETS

SHEET NO.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



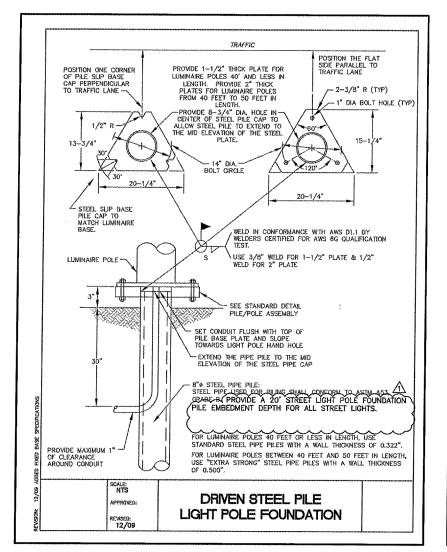
PHONE: (907) 235-3170 FAX: (907) 235-3145

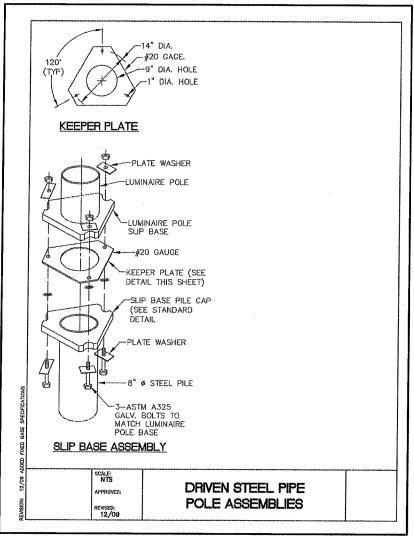


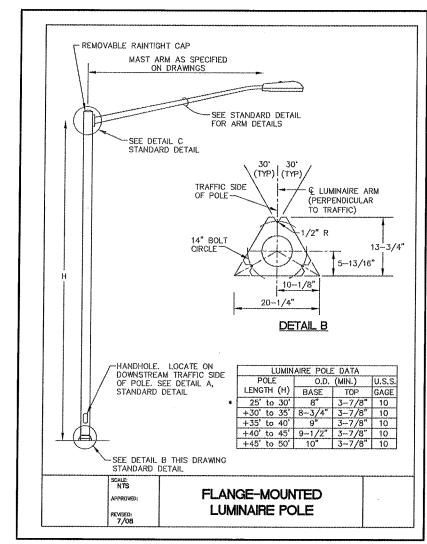
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

SIGN AND FENCE DETAILS







* PROJECT LUMINAIRE POLES SHALL MEET CRITERIA FOR 25' TO 30' POLE LENGTHS.

S	HEET NO.		TOTAL SHEETS
	H10		H12
	AD	DEND	UM NO.
	ATT	ACHM	IENT NO.
	ı	REVIS	IONS
NO.	DATE		DESCRIPTION
$\Lambda$	3/8/16	Ď	OT T/S COMMENTS
			AND ADDENDUMS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



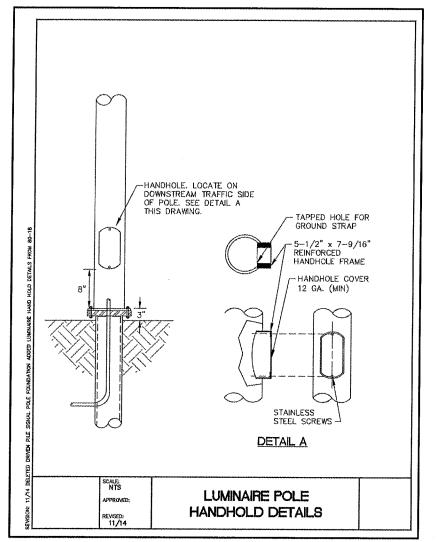
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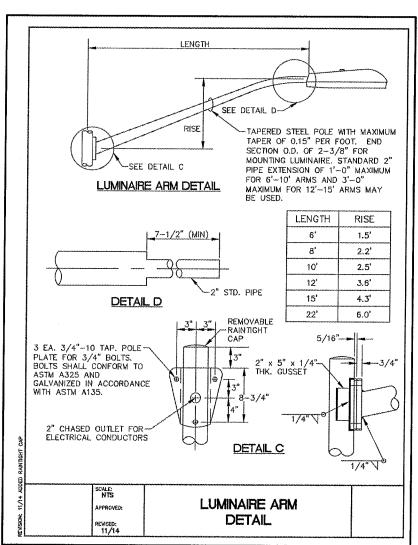


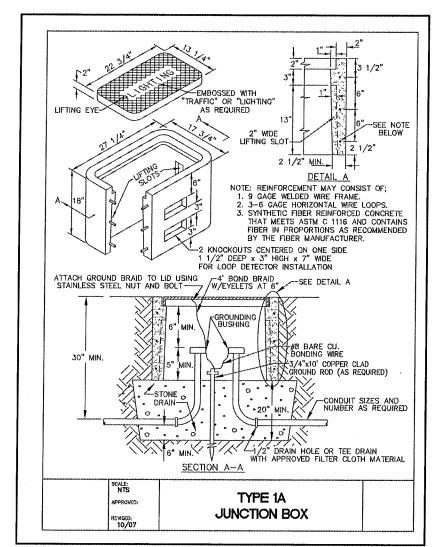
CITY OF HOMER

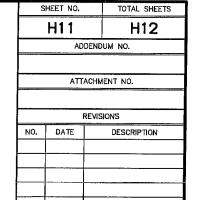
WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

ILLUMINATION DETAILS









PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



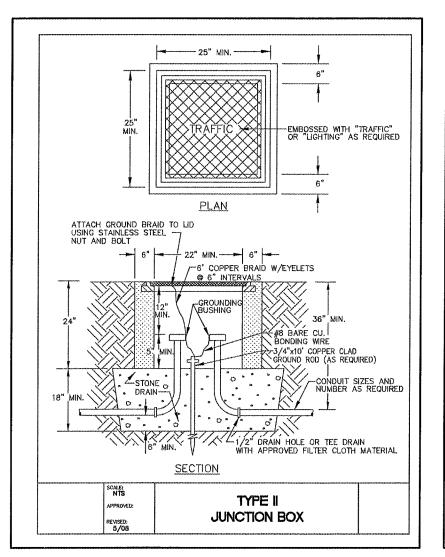
PHONE: (907) 235~3170 FAX: (907) 235~3145

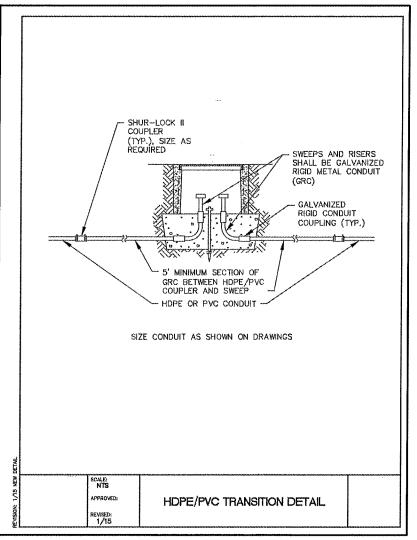


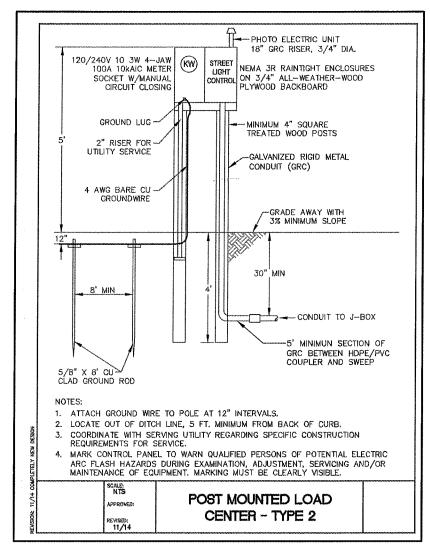
CITY OF HOME'R

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

ILLUMINATION DETAILS







#### NOTE:

CITY OF HOMER TO PAY FEES FOR TRANSFORMER INSTALLATION. CONTRACTOR TO PROVIDE METER BASE AND POSTMOUNTED LOAD CENTER AND COORDINATE WITH H.E.A. TO ENERGIZE.

	H12		H12
	ADD	END	UM NO.
	ATTA	СНМ	ENT NO.
	R	EVIS	IONS
NO.	DATE		DESCRIPTION

TOTAL SHEETS

SHEET NO.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMEN



PHONE: (907) 235-3170 FAX: (907) 235-3145



CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

ILLUMINATION DETAILS

#### HDPE WATER MAIN NOTES:

- HDPE PIPING MATERIAL HDPE PIPING MATERIAL SHALL CONFORM TO THE CITY OF HOMER STANDARD SPECIFICATIONS FOR HIGH DENSITY POLYETHYLENE PIPE. HDPE PIPE, TUBING, AND FITTINGS SHALL CONFORM TO ALL APPLICABLE PROVISIONS AND REQUIREMENTS OF THE LATEST REVISION OF AWWA C901 AND AWWA C906 AND, BY INCLUSION, ALL APPROPRIATE STANDARDS REFERENCED THEREIN. ALL PIPE AND FITTINGS 4" AND LARGER SHALL BE MANUFACTURED TO IRON PIPE SIZE EQUIVALENT OUTSIDE DIAMETER (IPS).
- 2. HDPE PIPING MATERIAL HDPE MJ/FLANGE CONNECTIONS SHALL BE ONE-PIECE, MOLDED POLYETHYLENE ADAPTERS WITH STAINLESS STEEL RETAINER RING. RETAINER RING SHALL BE TYPE 316 STAINLESS STEEL. MJ/FLANGE CONNECTIONS SHALL HAVE A MINIMUM PRESSURE RATING EQUAL TO OR GREATER THAN THAT OF THE HDPE PIPING. NUTS, BOLTS, AND WASHERS SHALL BE STAINLESS STEEL, TYPE 316. RUBBER GASKETS FOR MJ/FLANGE CONNECTIONS SHALL BE NSF STANDARD 61 CERTIFIED FOR USE IN POTABLE WATER SYSTEMS.
- 3. HDPE PIPING INSTALLATION ALL HDPE WATER MAIN PIPING AND FITTINGS SHALL BE BUTT-FUSED IN ACCORDANCE WITH ASTM D2657. THE INDIVIDUAL WHO PERFORMS THE BUTT-FUSION SHALL HAVE WRITTEN CERTIFICATION FROM AN HDPE PIPE MANUFACTURER STATING HE/SHE HAS SUCCESSFULLY COMPLETED SHALL HAVE (MINIMUM) CERTIFICATION CLASS ON BUTT-FUSION TECHNIQUES AND PROCEDURES. IN ADDITION, THIS INDIVIDUAL SHALL HAVE FUSED A COMBINED TOTAL OF MORE THAN 5,000 FEET OF HDPE PIPING IN DIAMETERS 4-INCHES AND LARGER.
- HDPE PIPING INSTALLATION A MAXIMUM OF THREE (3) JOINTS SELECTED AT RANDOM BY C.O.H. MAY BE TESTED FOR COMPLIANCE WITH ASTM D38 AS A QUALITY CONTROL MEASURE SPECIMENS TO BE TESTED SHALL BE OBTAINED BY CUTTING THE WATER MAIN PIPING AT LEAST 12 INCHES ON EACH SIDE OF A FIELD MADE JOINT. CONTRACTOR SHALL THEN REJOINTHE ENDS OF THE PIPING AND WORK MAY PROCEED. COSTS FOR REMOVAL AND REPAIR OF BUTT-FUSED JOINTS SHALL BE BORNE BY THE CONTRACTOR. ALL LAB COSTS ASSOCIATED WITH TESTING OF BUTT-FUSED JOINTS WILL BE BORNE BY CO.O.H.
- 5. HDPE PIPING INSTALLATION THE CONTRACTOR SHALL ENSURE THAT EACH JOINT IS FUSED AT THE TEMPERATURE AND PRESSURE RECOMMENDED BY THE PIPE MANUFACTURER IN ORDER TO ACHIEVE THE MAXIMUM PRESSURE RATING FOR THAT JOINT ALL BUTT FUSED JOINTS FOR HOPE PIPING AND FABRICATED FITTINGS SHALL BE DOCUMENTED BY A COMPUTER DATA LOGGER THAT RECORDS PRESSURE AND TEMPERATURE APPLIED AT EACH FUSED JOINT, ALONG WITH THE DATE AND THE THE JOINT WAS FUSED. COMPUTER PRINTOUTS, ELECTRONIC DATA, AND THE PROJECT STATION FOR EACH FIELD JOINT SHALL BE SUBMITTED TO C.O.H.
- 6. HDPE PIPING INSTALLATION THE USE OF ELECTRO-FUSION COUPLINGS TO JOIN HDPE PIPING MAY BE ALLOWED AT LOCATIONS WHERE THE BEND RADIUS IS GREATER THAN 75 FEET AND THE PIPE CURVATURE AT THE JOINT IS REDUCED TO A MINIMUM OF 100 TIMES PIPE OUTER DIAMETER FOR THE DURATION OF THE FUSION PROCESS UPON WRITTEN APPROVAL OF C.O.H.. ELECTRO-FUSION COUPLINGS SHALL COMPLY WITH ASTM F1055. CONTRACTOR SHALL RECORD THE EXACT LOCATION OF ANY INSTALLED ELECTRO-FUSION COUPLING IN THE RECORD DRAWING SUBMITTAL.
- 7. HDPE PIPING INSTALLATION CONTRACTOR SHALL INSPECT THE HDPE PIPING FOR DAMAGE IMMEDIATELY PRIOR TO JOINING. DAMAGE IS DEFINED AS CUTS OR GOUGES EXCEEDING 10% OF THE PIPE WALL THICKNESS, KINKED PIPE SECTIONS, PIPE SECTIONS FLATTENED TO MORE THAN 5% OF THE ORIGINAL DIAMETER, OR ANY ABRASION OR CUTTING OF THE INSIDE SURFACE OF THE PIPING. DAMAGED PORTIONS OF PIPING SHALL BE CUT OUT AND DISCARDED.
- 8. HDPE PIPING INSTALLATION THE HANDLING OF THE JOINED PIPELINE SHALL BE IN SUCH A MANNER THAT THE PIPE IS NOT DAMAGED. ROPES, FABRIC, OR RUBBER-PROTECTED SLINGS, OR STRAPS SHALL BE USED WHEN HANDLING PIPES. CHAINS, CABLES, OR HOOKS INSERTED INTO THE PIPE ENDS SHALL NOT BE ALLOWED. TWO SLINGS SPREAD APART SHALL BE USED FOR LIFTING EACH LENGTH OF PIPE. SLINGS FOR HANDLING THE PIPELINE SHALL NOT BE POSITIONED AT BUTT-FUSED JOINTS.
- 9. HDPE PIPING INSTALLATION THE HORIZONTAL BENDING RADIUS FOR HDPE PIPING SHALL NOT BE LESS THAN THE MINIMUM RADIUS RECOMMENDED BY THE PIPING MANUFACTURER.
- 10. HDPE PIPING INSTALLATION: TRACER WIRE INSTALL TRACER WIRE ON TOP OF ALL HDPE WATER MAINS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. TRACER WIRE SHALL BE SUITABLE FOR DIRECT BURY APPLICATIONS AND SHALL BE 10 AWG WITH 30-MIL HDPE JACKET (JACKET COLOR BLUE), CAPABLE OF A 575 POUND AVERAGE TENSILE BREAK LOAD. TRACER WIRE SHALL BE COPPERHEAD INDUSTRIES REINFORCED TRACER WIRE OR APPROVED EQUAL. TRACER WIRE SHALL BE INSTALLED IN CONTINUOUS LENGTHS WITH NO SPLICES. TERMINATE EACH END OF TRACER WIRE AT GROUND SURFACE IN A VALVE BOX TOP SECTION WITH CAP. PROVIDE A MINIMUM OF FIVE (5) FEET OF ADDITIONAL WIRE NEATLY COILED WITHIN VALVE BOX AT EACH END. SPLICES MAY BE ALLOWED AT THE DIRECTION OF THE ENGINEER. IF A SPLICE IS ALLOWED USE COPPERHEAD INDUSTRIES CONNECTOR, PART #5WB-01 (BLUE) OR APPROVED EQUAL.
- 11. HDPE PIPING FLUSHING NEWLY INSTALLED HDPE WATER MAINS SHALL BE OPEN-BORE FLUSHED BY C.O.H. PRIOR TO INSTALLATION OF WATER SERVICES. WATER FROM PIPE FLUSHING SHALL BE DIRECTED TO THE LAKE STREET (EAST) END OF THE PROJECT IN A MANNER THAT SHALL DISPOSE OF WATER TO EXISTING VEGETATED DRAINAGE FACILITIES WITHOUT CAUSING EROSION OR DAMAGING THE VEGITATION.
- 12. HDPE PIPING TESTING A HYDROSTATIC TEST SHALL BE CONDUCTED AFTER "OPEN-BORE" FLUSHING ON ALL NEWLY INSTALLED HDPE WATER MAINS IN THE PRESENCE OF C.O.H. PRIOR TO PERFORMING THE HYDROSTATIC TEST, ENSURE THAT THERE IS NO AIR TRAPPED IN THE TEST SECTION. THE HYDROSTATIC PRESSURE TEST PROCEDURE CONSISTS OF FILLING THE PIPING WITH WATER, AN INITIAL EXPANSION PHASE, A TEST PHASE, AND DEPRESSURIZING. BEFORE APPLYING HYDROSTATIC PRESSURE TEST, ALL PIPING AND ALL COMPONENTS IN THE TEST SECTION SHALL BE RESTRAINED AND THE TRENCH SECTION BACKFILLED TO ORIGINAL GRADE. THE MAXIMUM TEST DURATION IS EIGHT (8) HOURS INCLUDING TIME TO PRESSURIZE, TIME FOR INITIAL EXPANSION, TIME AT TEST PRESSURE AND TIME TO DEPRESSURIZE THE TEST SECTION. IF THE TEST IS NOT COMPLETED DUE TO LEAKAGE, EQUIPMENT FAILURE, OR FOR ANY OTHER REASON, DEPRESSURIZE THE TEST SECTION COMPLETELY AND ALLOW IT TO RELAX FOR AT LEAST EIGHT (8) HOURS BEFORE PRESSURIZING THE TEST SECTION AGAIN. THE NEWLY INSTALLED HDPE WATER MAIN SHALL BE HYDROSTATICALLY TESTED TO THE RATED OPERATING PRESSURE OF THE PIPE. THE RATED OPERATING PRESSURE OF BORIZE THE TEST SECTION TO TEST PRESSURE AND MAINTAIN TEST PRESSURE FOR FOUR (4) HOURS. DURING THE INITIAL EXPANSION PHASE, POLYETHYLENE PIPE WILL EXPAND SLIGHTLY. ADDITIONAL TEST LIQUID WILL BE REQUIRED TO MAINTAIN PRESSURE. IT IS NOT NECESSARY TO MONITOR THE AMOUNT OF WATER ADDED DURING THE INITIAL EXPANSION PHASE. IMMEDIATELY FOLLOWING THE INITIAL EXPANSION PHASE. PRESSURE BY 10 PSI AND STOP ADDING TEST LIQUID. IF THERE ARE NO VISIBLE LEAKS AND THE TEST PRESSURE REMAINS STEADY (WITHIN 5% OF THE TARGET VALUE) FOR ONE (1) HOUR, THE WATER MAIN SHALL BE DEEMED AS HAVING PASSED THE TEST.
- 13. VALVE MATERIAL GATE VALVES SHALL BE IRON BODY, RESILIENT-SEATED VALVES WITH NON-RISING STEMS FOR WATER SUPPLY SERVICE, MANUFACTURED IN ACCORDANCE WITH AWWA C509. GATE VALVES SHALL HAVE A TWO (2) INCH SQUARE OPERATING NUT, AND SHALL OPEN COUNTERCLOCKWISE. UNLESS OTHERWISE DETAILED ON THE DRAWINGS, VALVE AND VALVE/PIPE INTERFACE SHALL BE MJ/FLANGE TYPE CONNECTIONS CONFORMING TO AWWA C110. INTERIOR AND EXTERIOR VALVE COATING SHALL BE FUSION BONDED EPOXY (FBE) IN ACCORDANCE WITH AWWA C550. IF INTEGRITY OF FBE COATING IS DAMAGED DURING SHIPPING OR INSTALLATION, CONTRACTOR SHALL FIELD REPAIR FBE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CARBON STEEL ZINC PLATED NUTS, BOLTS, AND WASHERS WILL BE ALLOWED.
- 14. VALVE BOX MATERIAL USE MUELLER MVB COMPOSITE VALVE BOXES OR APPROVED EQUAL.

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PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC FOR

CITY OF HOMER, ALASKA PUBLIC WORKS DEPARTMENT



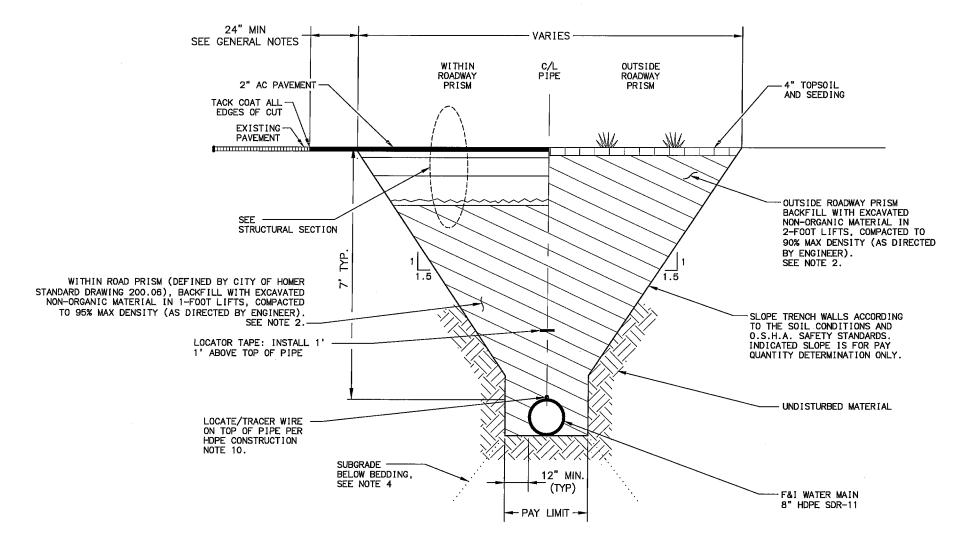
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CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

WATER MAIN NOTES



#### TRENCH SECTION NOTES

- TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. PROVIDE PORTABLE STEEL TRENCH SHIELD AS REQUIRED.
- 2. FOUNDATION MATERIAL FOR TRENCH BACKFILL SHALL BE NATIVE MATERIAL, MEETING TYPE II CLASSIFICATION (MINIMUM) AS APPROVED BY THE ENGINEER. NATIVE MATERIAL NOT MEETING TYPE II CLASSIFICATION SHALL BE REMOVED AND REPLACED WITH TYPE II FILL AND BACKFILL. BACKFILL MATERIAL WITHIN ROADWAY PRISM SHALL HAVE 8" MAXIMUM ROCK SIZE. SEE STANDARD DETAIL 200.06.
- 3. REMOVE AND PROPERLY DISPOSE OF ALL ORGANIC MATERIALS.
- 4. SUBGRADE BELOW BEDDING PRISM SHALL BE CLEARED OF ALL DEBRIS AND ORGANIC MATERIAL. BACKFILL AND COMPACT EXCAVATED SUBGRADE.
- 5. TYPICAL DEPTH OF BURY IS 7 FEET. FURNISH AND INSTALL 4"
  THICK INSULATION WHERE DEPTH OF BURY IS LESS THAN 7 FEET OR
  AS NOTED ON THE PLANS. INSULATION SHALL BE 4 FEET WIDE
  PLACED 1-FOOT ABOVE PIPE. INSULATION SHALL BE R-20 FOR A 4
  INCH THICKNESS.

TYPICAL TRENCH SECTION - HDPE WATER MAIN

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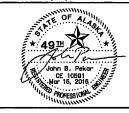
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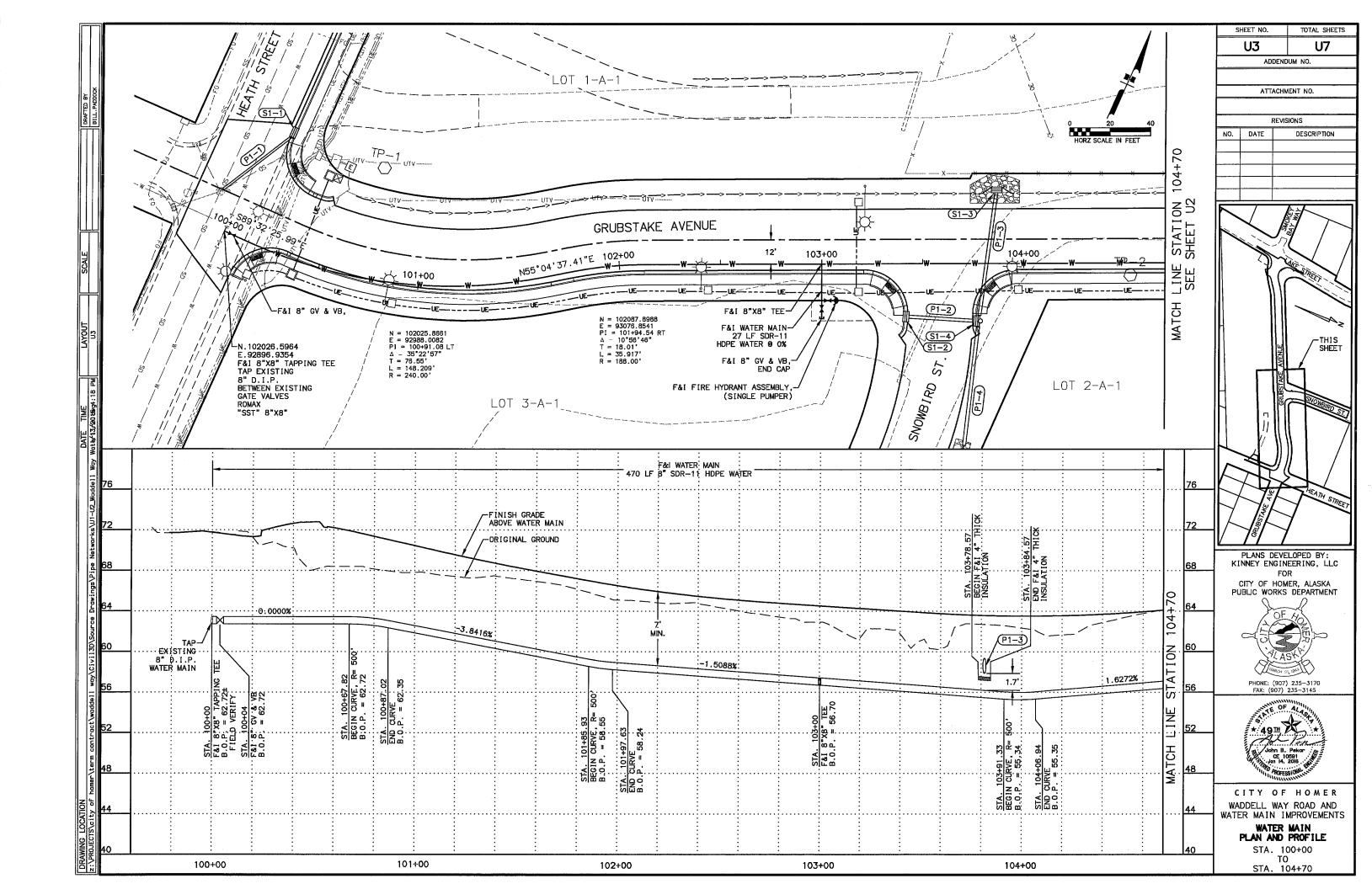
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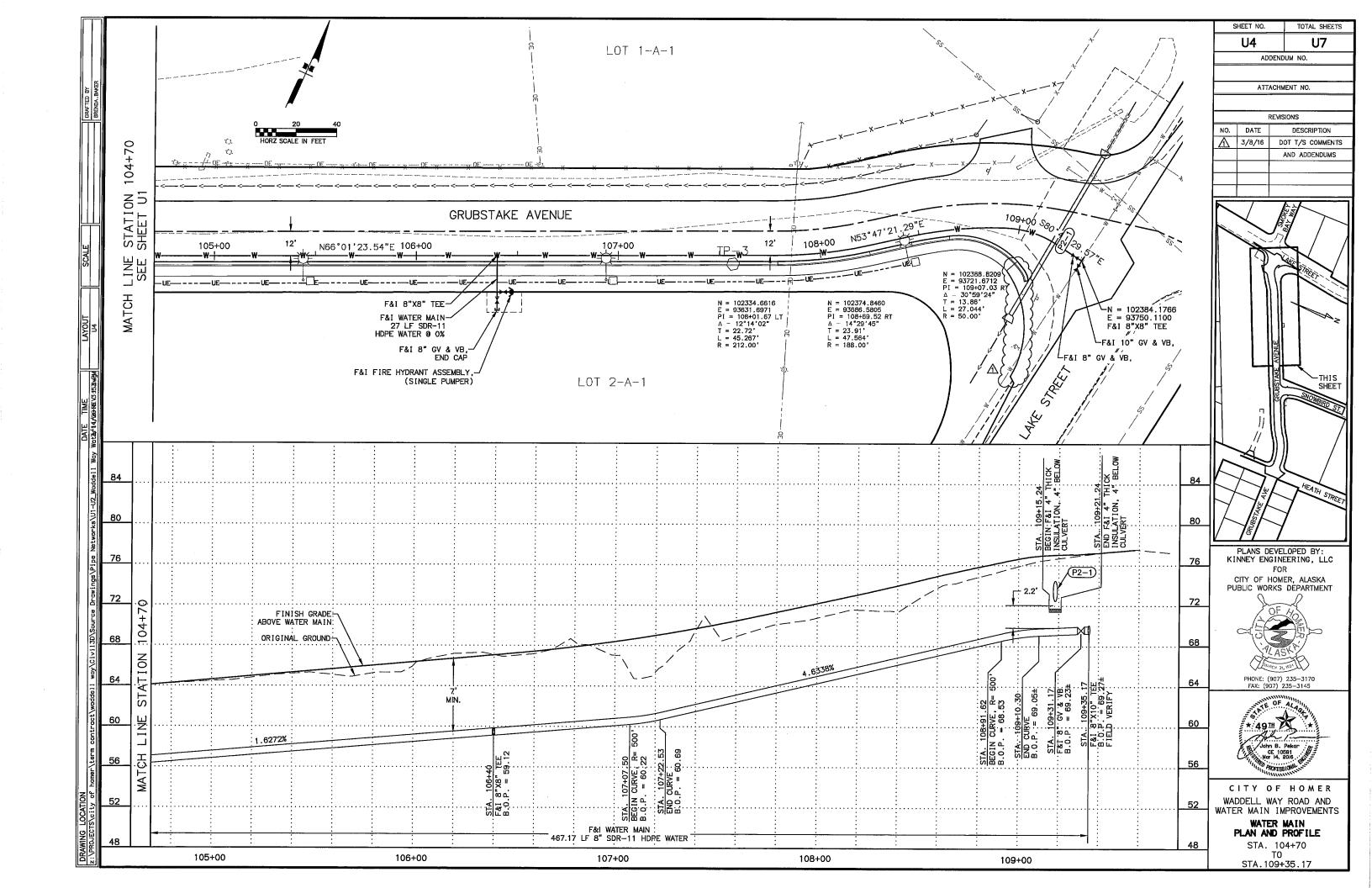


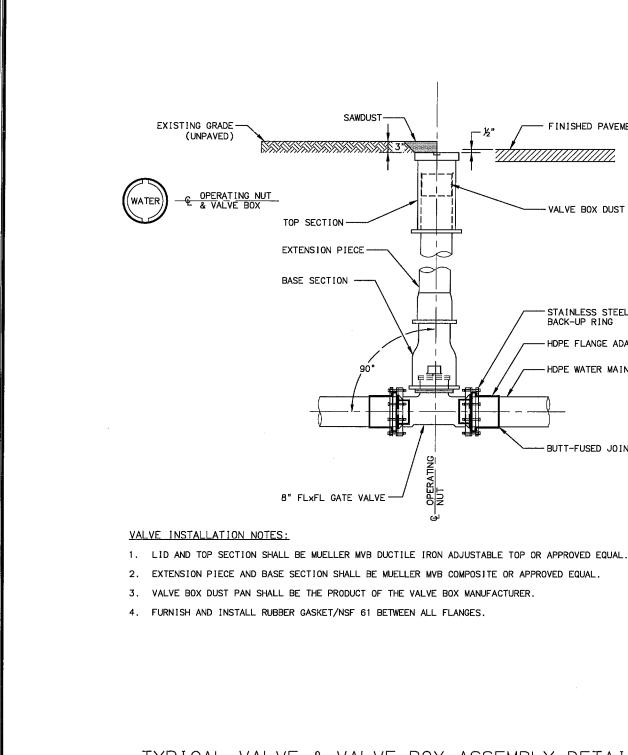
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

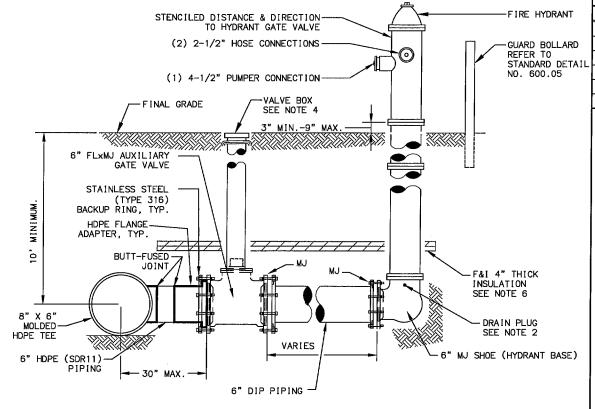
TYPICAL TRENCH SECTION







TYPICAL VALVE & VALVE BOX ASSEMBLY DETAIL



- 1. HYDRANT BARREL SHALL BE INSTALLED PLUMB AND THE LEG SHALL BE INSTALLED LEVEL.
- 2. DRAIN PLUG SHALL BE INSTALLED BY CONTRACTOR.
- 3. ALL HYDRANTS SHALL BE PAINTED CATERPILLAR YELLOW.
- AUXILIARY GATE VALVE & VALVE BOX SHALL BE INSTALLED TO ELEVATION ACCORDING TO DETAIL FOR TYPICAL VALVE & VALVE BOX ASSEMBLY. USE MUELLER MVB COMPOSITE VALVE BOX WITH MUELLER MVB DUCTILE IRON ADJUSTABLE TOP OR APPROVED EQUAL.
- 5. FURNISH AND INSTALL RUBBER GASKET/NSF 61 BETWEEN ALL FLANGES.
- 4" (R-20 EQUIVALENT) EXTRUDED POLYSTRENE, 60 PSI, RIGID BOARD INSULATION. 4' WIDE CENTERED OVER THE PIPE WITH STAGGERED INSULATION SEAMS. INSTALL ENTIRE LENGTH FROM THE MAIN TO THE HYDRANT SHOE, INCLUDING AROUND THE VALVE BOX BASE AND EXTENSION.

SINGLE PUMPER 'L' BASE HYDRANT ASSEMBLY DETAIL

ATTACHMENT NO. REVISIONS NO. DATE DESCRIPTION

ADDENDUM NO.

TOTAL SHEETS

**U7** 

SHEET NO.

**U**5

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CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

HOPE MJ DETAILS

**HYDRANT INSTALLATION NOTES:** 

FINISHED PAVEMENT

VALVE BOX DUST PAN

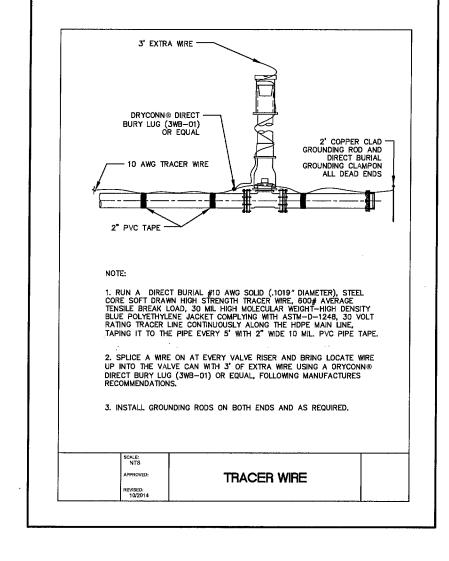
STAINLESS STEEL (TYPE 316)

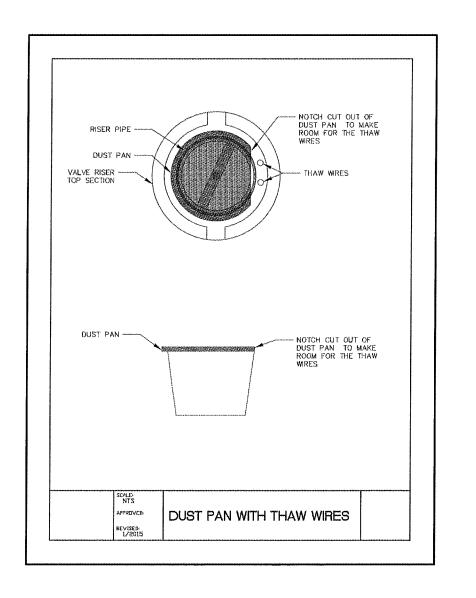
BACK-UP RING

- HDPE FLANGE ADAPTER

HDPE WATER MAIN

BUTT-FUSED JOINT





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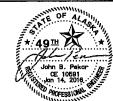
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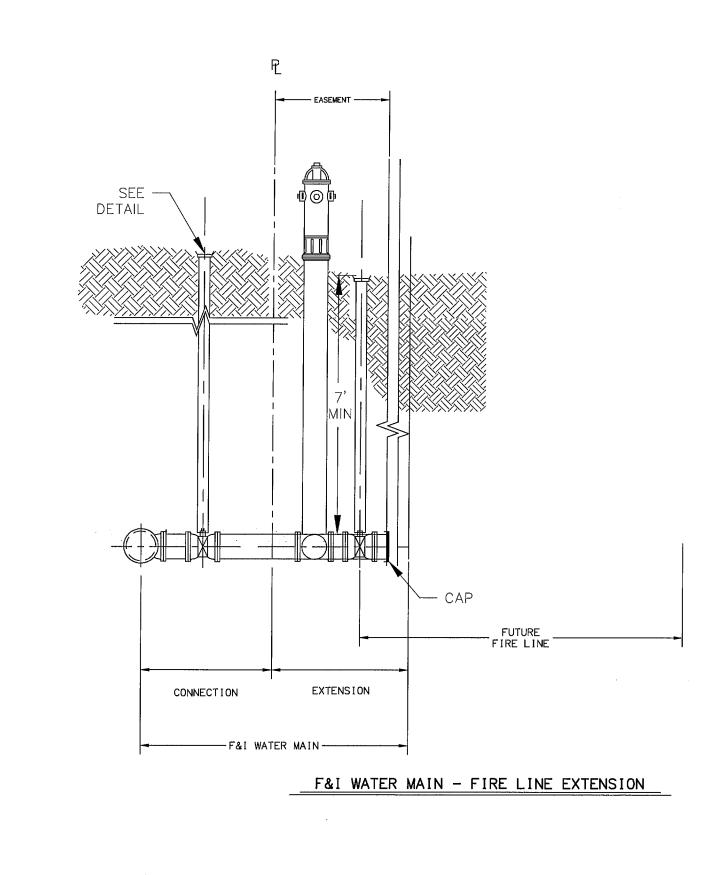
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CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

WATER MAIN DETAILS



SHEET NO. TOTAL SHEETS

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ADDENDUM NO.

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REVISIONS

NO. DATE DESCRIPTION

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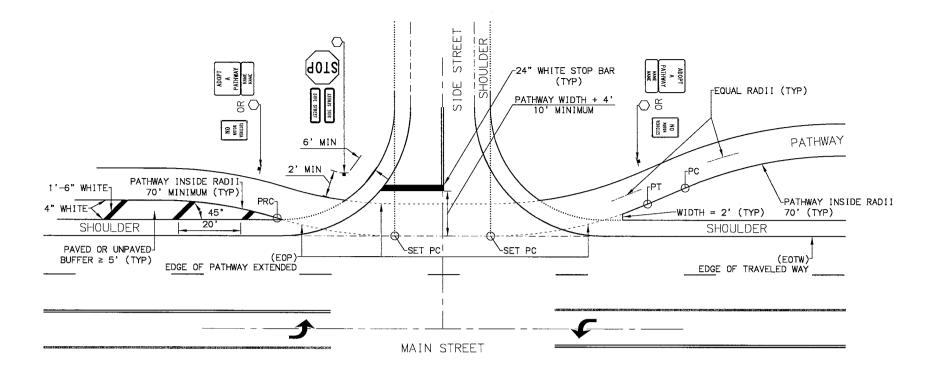
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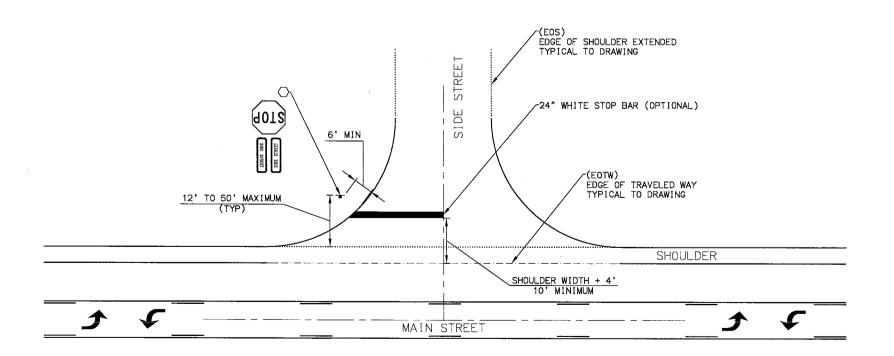
CITY OF HOMER

WADDELL WAY ROAD AND WATER MAIN IMPROVEMENTS

WATER MAIN DETAILS



# TYPICAL UNCURBED RETURN WITH PATHWAY



# TYPICAL UNCURBED RETURN WITHOUT SIDEWALK

#### UNCURBED INTERSECTION NOTES: (IN PRIORITY ORDER)

- 1. LOCATE STOP BAR 4' MINIMUM BEHIND THE WIDTH OF
- 2. LOCATE STOP SIGN SO IT IS VISIBLE TO APPROACHING TRAFFIC AND NEAR THE STOP BAR.
- 3. SEE PLANS FOR PATHWAY SIGNING REQUIRED AT SIDE
- 4. BREAK CENTERLINE STRIPING WITHIN INTERSECTIONS WHICH HAVE DEDICATED TURN LANES.
- 5. CONTINUE CENTERLINE STRIPING THROUGH INTERSECTIONS WITH CENTER TWO-WAY-LEFT-TURN-ONLY LANES OR WHEN THERE ARE NO LEFT TURN LANES.
- 6. CONTINUE LANE "SKIP" STRIPING THROUGH INTERSECTIONS.
- 7. DELETE OUTERMOST EDGE OF TRAVELED WAY STRIPING AT INTERSECTIONS OR WRAP EOTW STRIPING TO SIDE STREET
- 8. PROVIDE 2' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND EDGE OF PATHWAY OR SIDEWALK.
- 9. PROVIDE 6' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND EDGE OF SIDE STREET.
- 10."NO MOTOR VEHICLES" SIGNS ARE NOT REQUIRED WITHIN THE MUNICIPALITY OF ANCHORAGE.
- 11.STOP BARS ARE NOT REQUIRED WHEN NO PATHWAY OR SIDEWALK IS PRESENT. SEE PLANS.
- 12.MATCH SIDESTREET STRIPING IF STRIPING IS PRESENT.

	REVISIONS	
Date	Description	Ву
01/17/13	SHEET NUMBER AND DRAWING	SET
09/16/13	NOTES ADDED	SET
12/10/14	RADII/REVISED NOTES	SET
6/23/15	CED: ADA TILES NOT REQ	SET

#### SHEET 1 OF 2

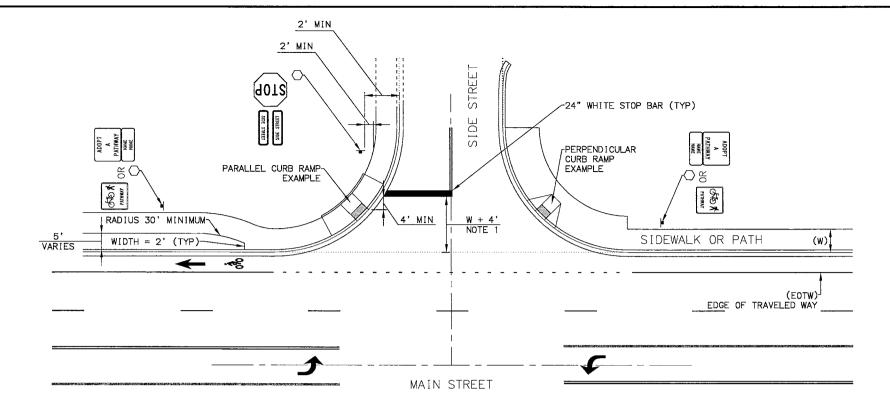
State of Alaska Department of Transportation & Public Facilities

UNSIGNALIZED INTERSECTION STOP AND CROSSING

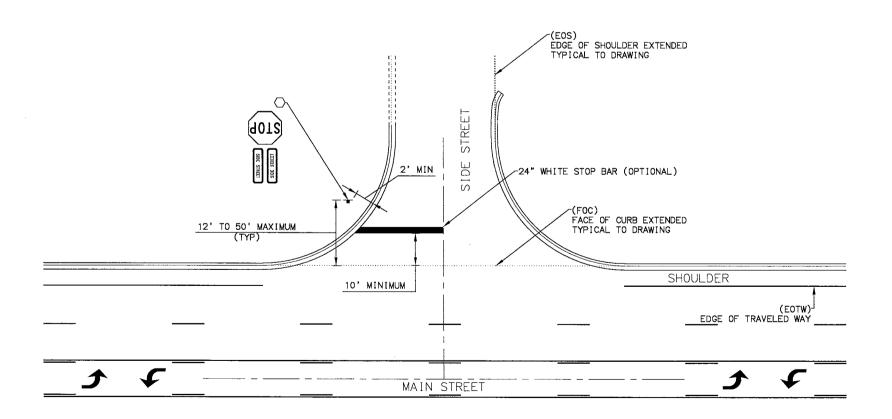


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Date



# TYPICAL CURBED RETURN WITH SIDEWALK



TYPICAL CURBED RETURN WITHOUT SIDEWALK

#### CURBED INTERSECTION NOTES: (IN PRIORITY ORDER)

- 1. LOCATE STOP BAR 4' MINIMUM BETWEEN THE TOE OF CURB RAMP AND EDGE OF STOP BAR OR A DISTANCE OF THE WIDTH OF THE SIDEWALK OR PATHWAY PLUS 4'.
- 2. LOCATE STOP SIGN SO IT IS VISIBLE TO APPROACHING TRAFFIC AND NEAR THE STOP BAR.
- 3. SEE PLANS FOR PATHWAY SIGNING REQUIRED AT SIDE STREETS.
- 4. BREAK CENTERLINE STRIPING WITHIN INTERSECTIONS WHICH HAVE DEDICATED TURN LANES.
- 5. CONTINUE CENTERLINE STRIPING THROUGH INTERSECTIONS WITH CENTER TWO-WAY-LEFT-TURN-ONLY LANES OR WHEN THERE ARE NO LEFT TURN LANES.
- 6. CONTINUE LANE "SKIP" STRIPING THROUGH INTERSECTIONS.
- 7. DELETE OUTERMOST EDGE OF TRAVELED WAY STRIPING AT INTERSECTIONS OR WRAP EOTW STRIPING TO SIDE STREET
- 8. PROVIDE 2' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND EDGE OF PATHWAY OR SIDEWALK.
- 9. PROVIDE 6' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND SIDE STREET FACE OF CURB.
- 10."NO MOTOR VEHICLES" SIGNS ARE NOT REQUIRED WITHIN THE MUNICIPALITY OF ANCHORAGE.
- 11.STOP BARS ARE NOT REQUIRED WHEN NO PATHWAY OR SIDEWALK IS PRESENT. SEE PLANS.
- 12.MATCH SIDESTREET STRIPING IF STRIPING IS PRESENT.

Date	Description	Ву	
01/17/13	SHEET NUMBER AND DRAWING	SE T	
09/16/13	NOTES ADDED	SE T	
12/10/14	REVISED NOTES	SE 7	

#### SHEET 2 OF 2

State of Alaska Department of Transportation & Public Facilities

UNSIGNALIZED INTERSECTION STOP AND CROSSING



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