



City of Bentonville
Bentonville Utility Board Meeting
Tuesday, October 3rd – 11:30 am
Bentonville City Hall 305 SW “A” St.
City Council Chambers

AGENDA

Call to Order
Pledge of Allegiance
Attendance
Approval of Minutes: September 5th, 2023

New Business

1. Resolution/Bid Award – 48” Water Line Material – Preston Newbill (pages 2 – 3)
2. Budget Adjustment – Trimble Software Upgrade – Travis Matlock, PE (pages 4 - 12)
3. Adjournment



City of Bentonville, Arkansas Agenda Item Form

Item Details

Council Meeting Date:		Submitted By:	
Phone:		For Department(s):	
Email:			

Item Type (Check all that apply)

Informational	Bid Award	Enter into an Agreement	Change Order
Recognizing Funds	Budget Adjustment	Waiver of Bid	Emergency Clause
Ordinance	Resolution		Informational

Title, Recommendation & Justification

Title:	
Action Recommendation & Justification:	
Additional Comments for Consideration (Optional):	

Amount for Approval:	\$
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Budget Impact

Is this Item Budgeted? YES NO ITEM HAS NO COST OTHER: _____

Budget Adjustment (to be completed by Finance when applicable)

Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue
Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue
Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue
Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue

Fund(s) Impacted

(check all that apply)

General Fund

Utility Fund

Street Fund

Other(s): _____

Budget Impact Notes for Consideration (Optional):

ITEM	QNTY	UNIT	PART NO.	DESCRIPTION	NW Winwater Cost	Extended Cost	Lead Time
1	60	FT	4614	48" DUCTILE TYTON DIP CL350 (20' LENGTH) NOM BCL/AC (D)	\$895.65	\$53,739.00	4-6 weeks
2	4	EA	4615	48" MJ BOLT PACK MJ GASKET/BOLTS AND NUTS	\$798.05	\$3,192.20	4-6 weeks
3	4	EA	4616	48" DUCTIL MEGALUGS 1148DEC RESTRAINTS	\$3,372.50	\$13,490.00	4-6 weeks
4	1	EA	4617	48" L301 BELL ADAPTER X MJS DIAPERS/GASKETS INCLUDED	\$14,555.12	\$14,555.12	TBD
5	1	EA	4618	48" L301 SPIGOT X MJS DIAPERS/GASKETS INCLUDED	\$14,702.05	\$14,702.05	TBD
6	2	EA	4619	48" LONG SLEEVE EXPOXY COATED	\$14,790.15	\$29,580.30	6-8 weeks
						\$129,258.67	



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Title:	
Action Recommendation & Justification:	
Additional Comments for Consideration (Optional):	

Amount for Approval:	\$
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Budget Impact

Is this Item Budgeted? YES NO ITEM HAS NO COST OTHER: _____

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Account Number (ORG-OBJECT)	Account Description	\$	\$
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Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue
Account Number (ORG-OBJECT)	Account Description	\$	\$
		Expense	Revenue

Fund(s) Impacted

(check all that apply)

General Fund Utility Fund Street Fund Other(s): _____

Budget Impact Notes for Consideration (Optional):

City of Bentonville, Arkansas

City Hall

305 SW A Street Bentonville, AR 72712

www.bentonvillear.com

Please Recycle!

**Navigation Electronics, Inc**

Jonesboro, Arkansas
72455

Josh Bettis**Quote #: Q15887****Date: Aug 8, 2023**

josh_bettis@neigps.com

Arkansas Survey & Construction Sales

(800) 949-1446

(870) 273-6333

CITY OF BENTONVILLE**Charlie Barnes**

cbarnes@bentonvillear.com

(M) (479) 531-0020 (O) (479) 271-5946

BILL TO

3200 SW Municipal Dr

BENTONVILLE, AR 72712

SHIP TO

3200 SW Municipal Dr

BENTONVILLE, AR 72712

Line #	Part Number	Description	Qty	List Price	Gov. Discount	Gov. Total
1.	109100-10	Trimble Alloy GNSS Receiver + Zephyr 3 Geodetic Antenna, includes: Zephyr 3 Geodetic Cable - GPS 30m LMR-400 TNC/TNC Alloy Accessory Kit includes: 120030 - 2.4 GHz Wifi stick antenna 176767 - 1 Li-Ion Smart Battery 107000 - Power Supply 78651 - Power Cord Kit 78656 - Power Cord, 6 ft 59044 DB9 - Power Cable - 1.5m, DB9(F) Y to OS/7P/M to Power Jack 19309-00 - DB9 Data Cable - 1.8m, DB9/M-DB9/F, Data 50150-00 - Cable - 2M ETHERNET 10Base-T CAT5 74399-00 - Cable USB mini-B Plug Host to A JACK 74408-00 - Cable USB mini-B plug to A plug 41124 - Tripod Clip EM/TM3 Tripod 27953 - Tripod Clip Screws	1	\$ 16,015.00	\$ 800.75	\$ 15,214.25
2.	109UPG-100HZ	Trimble Alloy Upgrade - 100Hz Data Rate	1	\$ 550.00	\$ 27.50	\$ 522.50
3.	109UPG-24GB	Trimble Alloy Upgrade - 24GB Memory	1	\$ 830.00	\$ 41.50	\$ 788.50
4.	109UPG-GAL	Trimble Alloy Upgrade - Enable Galileo	1	\$ 1,655.00	\$ 82.75	\$ 1,572.25
5.	109UPG-BDS	Trimble Alloy Upgrade - Enable Beidou	1	\$ 1,655.00	\$ 82.75	\$ 1,572.25
6.	109UPG-BATT	Trimble Alloy Upgrade - Dual (second) battery	1	\$ 215.00	\$ 10.75	\$ 204.25
7.	EWTA-ALLOY-HW	TPP - Hardware - TAP Alloy Receiver	4	\$ 860.00	\$ 172.00	\$ 3,268.00

Sub Total

\$ 23,142.00

Grand Total

\$ 23,142.00

Purchase orders should be addressed to:

Navigation Electronics, Inc

124 Toledo Dr.

Lafayette, LA 70506

Please email a copy of your order to: josh_bettis@neigps.com



NEI is a Certified
Woman Owned Small Business

Quote: Q15887

FOB: Origin, customer pays all shipping costs

Terms: Net 30

Delivery: 5 Days ARO

Valid Until: Dec 31, 2022

Order Placement Procedures

Complete and Sign this Quotation

Sign this quotation and return via email or facsimile before the expiration date: Dec 31, 2022

Complete Lease Agreement

If this order is to be leased, complete the lease agreement sent to you, following the enclosed instructions. Order fulfillment will start after the lease is approved. Please note that due to fluctuations in interest rates, leasing terms cannot be guaranteed, contact House Account to lock in rates.

Credit Card Payment

Avoid a credit card surcharge by making an **ACH payment**. Contact accounting@neigps.com for or call 337-237-1413 or 800-949-1446 for setup instructions.

Quote # Q15887

Client Representative

X_____

Approved By (Signature)

X_____

Approved By (Name)

Date

Purchase Order Number



Alloy

GNSS Reference Receiver

The Future of GNSS is here

The Trimble® Alloy GNSS receiver offers powerful performance with the latest GNSS technology in a sleek new design that is easy and intuitive to use. Whether you need GNSS for campaign work or in permanent installations, the flexible configuration delivers reliable, robust data when and where you need it.

Modernized GNSS Tracking

Using powerful Trimble 360 receiver technology in combination with dual Trimble Maxwell™ 7 chipsets, the Alloy GNSS receiver supports all known and planned GNSS constellations, ensuring your GNSS data is robust and reliable including GPS Block IIIA and BeiDou Generation III.

Intelligent Design

Review Key Info at a Glance

With a four-line angled display you can read all important information such as satellite tracking, position solution type, data logging, IP address, Wi-Fi, firmware information and battery status right on the home screen. Setup and verifying status information is now quick and easy.

Plug in and get to work

Multiple ports are easily accessible without the need for adapters in a configuration that makes it simple to plug in a variety of external sensors and antennas.

Power when you need it

The Alloy receiver provides the most robust power options for any GNSS system. Featuring multiple power inputs with dual hot-swappable batteries, power over Ethernet, and advanced power management features, the Trimble Alloy GNSS receiver is ideal for any GNSS base station deployment.

Stackable Design

With a versatile, stackable design the Alloy GNSS receiver is built with a lightweight rugged aluminum alloy chassis which features IP68 certification. When you need to organize multiple units for deployment, simply stack and prep.

Benefits

- Dual Trimble Maxwell 7 chipsets combined with a powerful processor provides the ultimate in tracking and processing power
- Ethernet and Wi-Fi support provide ease of access, configuration, and transfer of data. Using the built-in web interface gives instant access to a simple-to-use configuration suite
- Dual hot-swappable internal batteries with integrated charging makes the Alloy receiver suitable for use in the office or remote locations, and anywhere in between
- The intelligent design features multiple connectors and stackable housing, making the Alloy receiver easy to configure for deployment
- Seamless integration to Trimble Pivot™ platform software for easy Real-Time Network operations
- Designed to an IP68 certification the Alloy receiver is ready for any environment
- Includes firmware for life so it's easy to keep your Alloy reference receiver up-to-date with the latest features, enhancements and security updates, free to install from alloy.trimble.com





Alloy

GNSS Reference Receiver



Security 24/7

Using Trimble Sentry™ technology, you can easily configure alerts that will automatically inform you of any changes to the position, data logging, configuration, tracking, power, communications, and system access events. Combined with advanced security measures such as anti-spoofing, Trimble Sentry technology ensures continued operation of your Trimble Alloy GNSS receiver.

Trimble RTX on Board

The Alloy GNSS receiver is available with Trimble RTX™ advanced positioning technology allowing for rapid real-time network coordination. Whether this is for base station deployment or monitoring, Trimble RTX technology remains locked onto your real world absolute position.

Communication

The Trimble Alloy GNSS receiver supports a wide range of communication protocols including Ethernet (IPv4 / IPv6), Bluetooth®, and Wi-Fi for flexible easy access via the built-in multi-language web interface and mini-web interface for mobile devices.

Data

Storage

The Alloy GNSS receiver can store more data in less space by using specialized compression formats. Up to twelve independent high-rate data logging sessions can be stored internally. USB compatibility ensures data portability with external data transfer and temporary external storage.

Access

Leveraging advanced communication protocols, data can be accessed via the web interface, built-in FTP server, or configured to be pushed to remote FTP sites or email accounts in multiple industry formats.

SPECIFICATIONS¹

GNSS TECHNOLOGY

Trimble RTX worldwide corrections

Advanced Trimble dual Maxwell 7 GNSS chipset provide 672 channels for simultaneous satellite tracking and anti-spoofing capabilities

Trimble ProPoint[®] GNSS positioning engine. Engineered for improved accuracy and productivity in challenging GNSS conditions.

Trimble EVEREST[™] Plus multipath signal rejection

Trimble 360 receiver technology

High-precision multiple correlator for GNSS pseudorange measurements

Spectrum Analyzer to troubleshoot GNSS jamming

Trimble Sentry delivers anti-spoofing security

Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low-time domain correlation and high dynamic response

SATELLITE TRACKING

GPS: L1C, L1 C/A, L2E (L2P), L2C, L5

GLONASS: L1 C/A² and unencrypted P code, L2 C/A and unencrypted P code, L3 CDMA

Galileo: E1, E5A, E5B and E5AltBOC, E6

BeiDou: B1, B2, B3, B1C, B2A, B2B

QZSS: L1 C/A, L1C, L1S, L2C, L5, LEX/L6³

IRNSS: L5, S-Band

SBAS: L1 C/A (EGNOS/MSAS GAGAN/SDCM), L1 C/A and L5 (WAAS)

L-Band: Trimble RTX

INPUT/OUTPUT FORMATS

Correction formats: CMR, CMR+, CMRx, GAGAN, RTX, RTCM 2.x, RTCM 3.x

Observables: RT17, RT27, BINEX, RTCM 3.x

Position/Status I/O: NMEA-0183 v2.30, GSOF

Up to 100 Hz output

10 MHz external frequency input

Normal input level 0 to +13 dBm

Maximum input level +17 dBm, ±35 V DC

Input impedance 50 Ohms @ 10 MHz; DC blocked

1 PPS output

Event input

Met/Tilt sensor support

POSITIONING PERFORMANCE

Differential positioning

	Horizontal	Vertical
Code differential GNSS positioning ⁴	0.25 m + 1 ppm RMS	0.50 m + 1 ppm RMS
SBAS differential positioning accuracy ⁵	0.50 m RMS	0.85 m RMS

Static GNSS surveying⁴

	Horizontal	Vertical
High-accuracy static	3 mm + 0.1 ppm RMS	3.5 mm + 0.4 ppm RMS
Static and Fast static	3 mm + 0.5 ppm RMS	5 mm + 0.5 ppm RMS

Real-Time kinematic surveying⁴

	Horizontal	Vertical
Single baseline < 30km	8 mm + 1 ppm RMS	15 mm + 1 ppm RMS
Networked RTK ⁶	8 mm + 0.5 ppm RMS	15 mm + 0.5 ppm RMS

Initialization time typically < 10 seconds

Initialization reliability typically > 99.9%

SPECIFICATIONS¹

COMMUNICATION

Serial Ports:	Two 9-pin Male
	Two 7-pin Lemo
USB: one Mini-B USB 5-pin / RDNIS (Device and Host modes)	
Ethernet: one RJ45 (Full-duplex, auto-negotiate 100Base-T)	HTTP, HTTPS, TCP/IP, IPv4 / IPv6, UDP, FTP, NTRIP Caster, NTRIP Server, NTRIP Client, Proxy server
	Routing table, NTP Server, NTP Client support
	Email Alerts and File Push
	DNS client support
	SNMP Agent
Wi-Fi: 802.11 b/g, access point and client mode, WPA/WPA2/WEP64/WEP128 encryption	
Bluetooth ⁷ : Integrated 2.4 GHz Bluetooth; supports three simultaneous connections	

DATA LOGGING

Storage capacity:	Onboard Memory (Journaling)	up to 24 GB ⁸
Maximum data logging rate	100 Hz	
Maximum combined data logging rate	188 Hz	
File durations	1 minute to continuous	
Storage sessions	12 concurrent independent sessions with dedicated memory pooling	
File formats	T02, T04, BINEX, RINEX v2.x/3.0x, Google Earth KML/KMZ	
File naming conventions	Multiple	
Data retrieval and transfer	HTTP, FTP Server, USB	
Events	Definable file protection on events	

PHYSICAL SPECIFICATIONS

Alloy receiver dimensions (L x W x H)	20.98 cm x 21.36 cm x 7.62 cm (8.41 in x 8.26 in x 3 in)	
Alloy receiver dimensions with brackets attached (L x W x H)	26.77 cm x 21.36 cm x 8.3 cm (8.41 in x 10.54 in x 3.27 in)	
Weight	2.34 kg (5.17 lbs)	

ENVIRONMENT

Operating temperature ^{9,10}	-40 °C to +65 °C (-40 °F to +149 °F)	
Storage temperature	-40 °C to +80 °C (-40 °F to +176 °F)	
Humidity	100% condensing	
Shock	Operating	40 g per MIL-STD-810G Table 5.16.6-VII
	Non operating	75 g per MIL-STD-810G Table 5.16.6-VII Designed to survive 1 m bench drop
Vibration	Operating	MIL-STD-810G Fig. 5.14.6C-1 Category 4
	Ingress protection	IP68 Certified per IEC-60529 - waterproof/dustproof (1 m submersion for 1 hr)

USER INTERFACE

Front panel display	4-line x 32 character reversible OLED display
	7 button input configuration
	Adjustable LED backlighting
Multiple language support for front panel and web UI – Chinese, Dutch, English, Finnish, French, German, Italian, Japanese, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish	
Web user interface: Allows remote configuration, data retrieval, and firmware updates over HTTPS/HTTP	

ANTENNA SUPPORT

Output voltage	5 V DC nominal
Maximum output current	150 mA
Maximum cable loss	12 dB
Recommended antennas	Trimble Zephyr™ 3 Geodetic, Trimble GNSS-Ti v2 Choke Ring



GNSS Reference Receiver

SPECIFICATIONS¹

SECURITY

HTTP login

HTTPS/SSL

Programmatic interface authentication

NTRIP

IP filtering

ELECTRICAL

Power over Ethernet (PoE) 802.3af (Type 1), 802.at (Type 2)

10.8 to 28.0 V DC input on 2 Lemo ports

User-configurable power-on voltage

User-configurable power-down voltage

User-configurable 12 V DC power output on serial port #2

Integrated dual hot-swappable smart batteries (7.4 V, 7800 mA-hr, Li-Ion batteries) with up to 15 hours of continuous operation

Seamless switching between external/internal power sources

Configurable minimum input voltage for battery charging

Integrated battery charging circuitry

Power consumption – 3.8 W or higher, dependent on user settings

REGULATORY COMPLIANCE

FCC Part 15 (Class B device), CISPR 32, 24

RED CE Mark

RCM

UN 38.3 – ST/SG/AC.10/27/Add.2 Rev.5 (Li-Ion battery)

IEC 62133(Ed.2) and EN 62133: 2013 (Li-Ion battery)

RoHS, China RoHS, WEEE

¹ Specifications subject to change without notice.

² L2 C/A on GLONASS-M satellites.

³ LEX/L6 supported on QZSS Block I satellites.

⁴ Accuracy may be subject to degradation by multipath interference, obstructions, satellite geometry and atmospheric conditions. Always follow recommended survey practices.

⁵ Depends on WAAS/EGNOS system performance.

⁶ Networked RTK PPM values are reference to the closest physical base station.

⁷ Bluetooth type approvals are country specific.

⁸ Trimble's highly efficient T02 data logging format makes this equivalent to 32 GB to 55 GB for competitive receivers.

⁹ Operating temperature when connected to external DC supply. To protect the removable Li-Ion batteries from extreme temperatures, the battery charger only operates from 5 °C to 35 °C (41 °F to 95 °F).

¹⁰ If operated only with batteries and no external DC supply, operating temperature is -20 °C to +55 °C (-4 °F to +131 °F).

Contact your local Trimble Authorized Distribution Partner for more information

NORTH AMERICA

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EUROPE

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Am Prime Parc 11
65479 Raunheim
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