

Project 2706

**Submitting Air Force Shanghai Base
Underground Command Post Communication
& Control System Construction
Project Design Task Plan**

English translation is for reference only,
please refer to the original Chinese version for any discrepancies

01

Secret

**PLA Air Force Command & PLA Air Force
Logistics Department (Request for Approval)**

Command
Communication [2007]
No. 116

Signed by Yang Guohai
Reviewed by Zhu
Hongda

**Submitting the Project Design Task Plan of the
Construction of Communication and Command-
and-Control System of the Air Force Shanghai
Base Underground Command Post**

General Staff, General Logistics Department:

According to the instruction spirit of General Staff
Communication [2007] No. 433 "Assign the First
Batch of Battlefield Communication Facilities
Construction Projects of 2007", combined with the Air
Force's anti-"Taiwan Isolation" emergency combat
preparation tasks, and by sorting out the operational
requirements of the communication and command-

—1—

English translation is for reference only,
please refer to the original Chinese version for any discrepancies

and-control system of the Air Force Shanghai Base
underground command posts, the construction
project design task plan is hereby submitted.

This communication system construction project
mainly includes: infrastructure construction such as
optical (electrical) transmission, satellite, and short-
wave communication, application network
construction such as program-controlled (manual)
switching and video conference, and other supporting
projects including communication power, etc. The
command-and-control system construction project
mainly includes: integrated wiring, display control and
network equipment installation in the command posts.
After the above tasks are completed, they can be
interconnected with other systems in the region
according to the requirements of the integrated
command platform to meet the needs of combat
command. According to the calculation, the above-
mentioned construction projects will require a total
construction expense of 29.93 million yuan.

Please give instructions on whether this plan is
appropriate.

—2—

English translation is for reference only,
please refer to the original Chinese version for any discrepancies

Attachment: The Project Design Task Plan of the
Construction of Communication and Command-and-
Control System of the Air Force Shanghai Base
Underground Command Post

PLA Air Force Command &
PLA Air Force Logistics Department

November 3, 2007

—3—

Attachment

The Project Design Task Plan of the Construction of Communication and Command-and-Control System of the Air Force Shanghai Underground Command Post

1. Project name: Construction of Communication and Command-and-Control System of the Air Force Shanghai Base Underground Command Post.
2. Project code: 2706.
3. Construction location: Zaoyang Road, Shanghai.
4. Construction Basis: General Staff Department's General Staff Communication [2007] No. 433 "Assign the First Batch of Battlefield Communication Facilities Construction Projects of 2007" and the combat tasks and combat plans undertaken by this underground command post.
5. Construction purpose: Through the construction of this project, the Air Force Shanghai Base underground command post will have communication and command-and-control functions such as the transmission, processing, exchange of data, voice, and image information and short-wave transmitting and receiving, to

provide stable, reliable and uninterrupted command means for combat command.

6. Construction scope and contents:

a. Communication system construction

The construction of command post

communication hub: install one program-controlled 512 switch, one ATM data switch, one digital security switch, one AI powered switch, one command and dispatch system, and one video conference system; install one satellite mobile cabin station, 10 PCM access devices, one ODF, one DDF, one MDF, and 2 sets of supporting equipments including rectifier power system, battery pack, UPS power supply, etc.

The construction of receiver station:

Install 20 400W shortwave adaptive receivers, 1 centralized receiving console, and 20 shortwave integrated service terminals; set up 5 receiving antennas of various types and 4 Antenna splitters; and lay 3 kilometers of cables. Install 1 set of short-wave broadband optical fiber transmission equipment. Build 1 new lightning protection and grounding system for the antenna field. Install 1 AC power distribution cabinets.

The construction of transmitter station:

Install 20 400W shortwave adaptive transmitters, set up 18 transmitting antennas of various types and 1 sets of antenna switching systems, lay 8 kilometers of cables; install 1 set of 622Mb/s optical transmission equipment and 2 sets of PCM access equipment; build one new lightning protection and grounding system for the antenna field, and install 1 AC power distribution cabinets.

Construction of optical cable lines: Lay 60 kilometers optical cables connecting the newly-built transmitting/receiving stations with the underground command post, the Air force Shanghai Command Post, and the local civil telecommunication optical cables.

b. Command-and-control system construction
About 16,000 meters of shielded twisted-pair cable, 8,000 meters of metal line pipe, 5,000 meters of video and audio cable; 1,200 sets of corridor trunking, 1 fiber optic patch paneling, 1 set of voice wiring, 600 information modules, 100 floor-mounted optical outlet, 7 sets of wiring cabinets, 1 set of wiring management system; 1 item of power supply for lead-in

equipment; 1 set of special connectors, test instruments and construction tools 4 sets; installation of special network, display control and security equipment for the Air Force; system integration 1.

7. Warfare technology requirements: through the construction of the project, requires new multi-route military optical cable to the local telecommunications company dispatch line optical cable, and open the main tunnel optical transmission system, the system capacity of not less than 2.5G with the potential of being upgraded to 10G; new short-wave transceiver, transmitter station and other communication and control system. After the completion of the system, the southern air ground command post shall be equipped with communication and command and control functions such as data, voice, image information transmission, processing, exchange and shortwave communication, so that it can provide stable, reliable and uninterrupted command means for combat command.

8. Estimated budget: the total construction cost is estimated to be 29.93 million yuan. Among them,

the command post communication hub construction 6.24 million yuan; short-wave receiving station construction 2.13 million yuan; short-wave transmitting station construction 6.2765 million yuan; route line construction 4.13 million yuan; command-and-control system construction 7.86 million yuan; other construction costs 1.8645 million yuan; preparatory costs 1.4251 million yuan.

9. Organization and implementation: the construction of the supporting communication and command-and-control system of the Air Force Shanghai Underground Command Post is organized and implemented by the Communication Department of the Air Force Command, designed by the Communication Engineering Design Institute of the Air Force Command, and constructed by the troops under the Air Force of Nanjing Military Region.
10. Schedule: construction drawings will be completed in mid November 2007, construction will begin in late November 2007, and project construction will be completed in December 2007.

Attachment: The Project List of the Construction of Communication and Command-and-Control System of the Air Force Shanghai Base Underground Command Post

Key words: Communication, Command-and-control, construction projects [Shanghai Underground Command Post]

CC: Operations Department and Communication Department of General Staff; Finance Department of General Logistics Department; Operations Department and Communication Department of the Air Force Command; Finance Department of Air Force Logistics Department. (9 copies in total)

Project owner: Communication Department of Air Force Command

Contact: Xiao Mouji

Tel: 986523

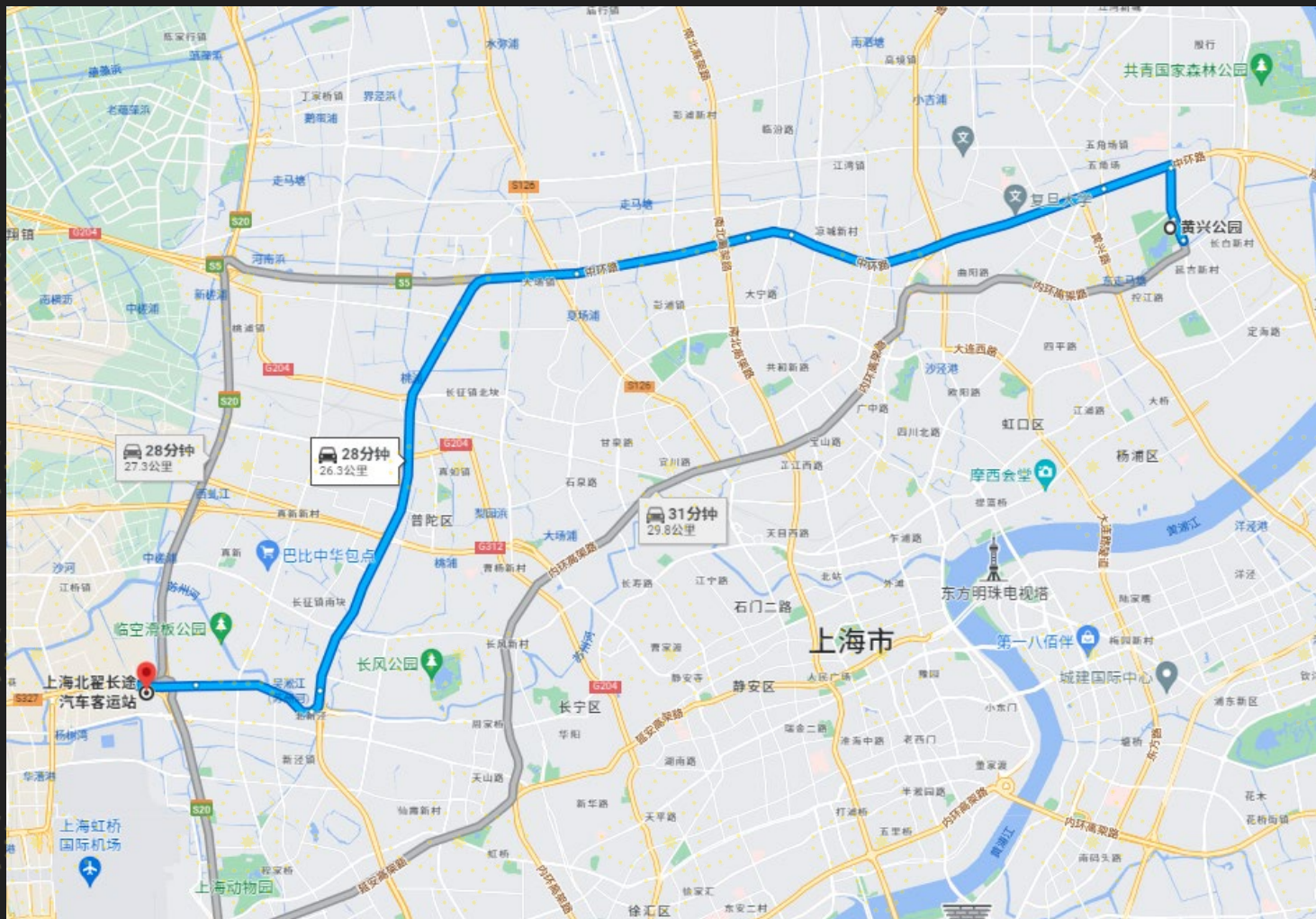
Finance Department of Air Force Logistics Department

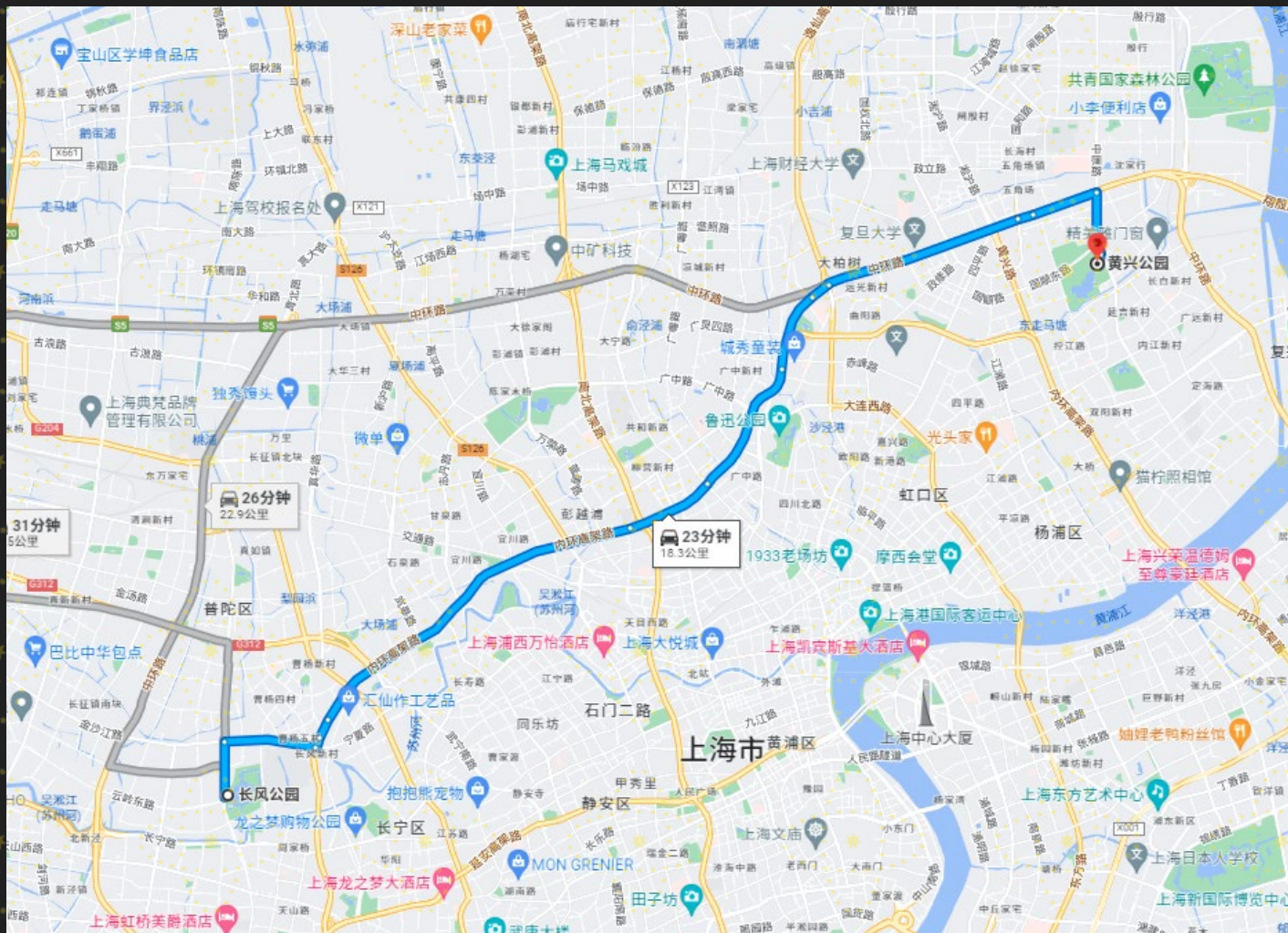
Contact: Zhang Zhenxi

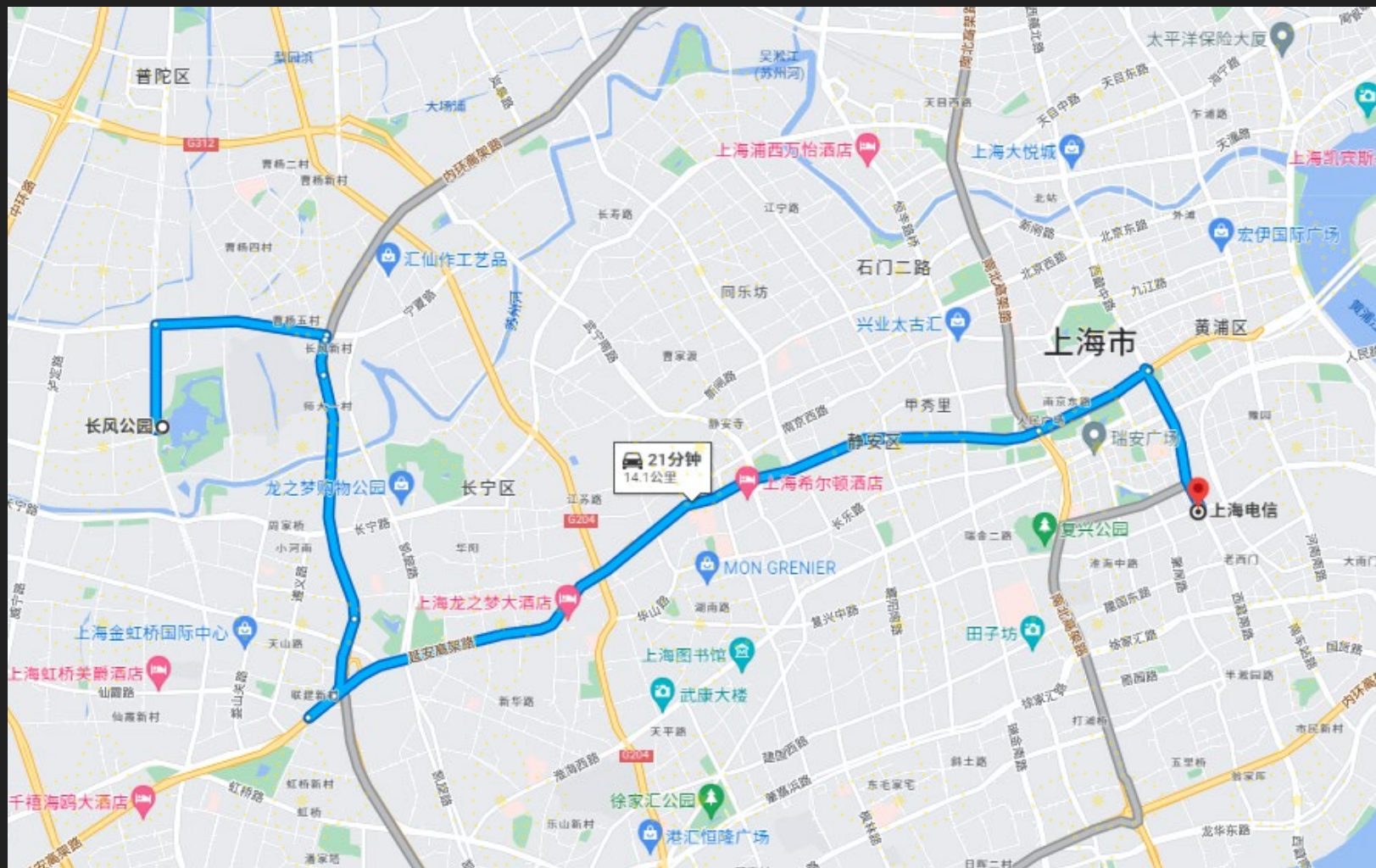
130, Shanghai underground command post supporting optical cable lead-in

130、上海地下指挥所配套光缆引接

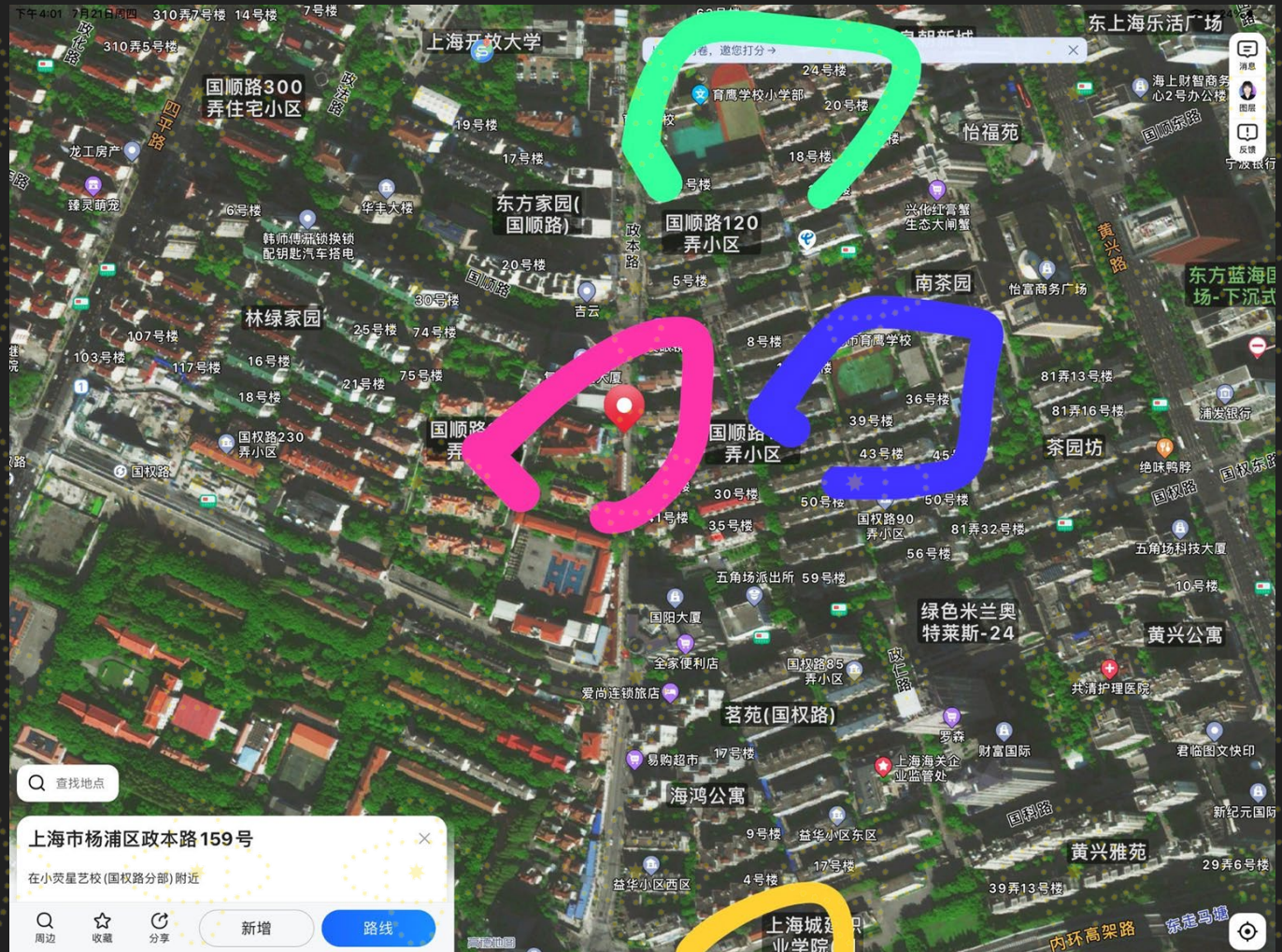
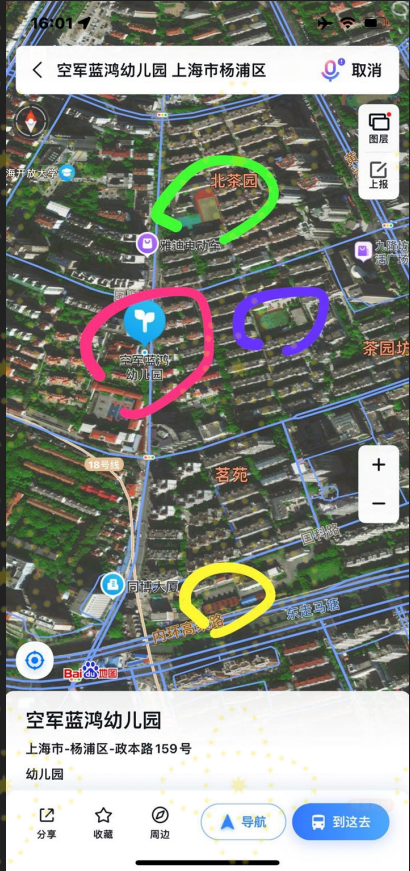


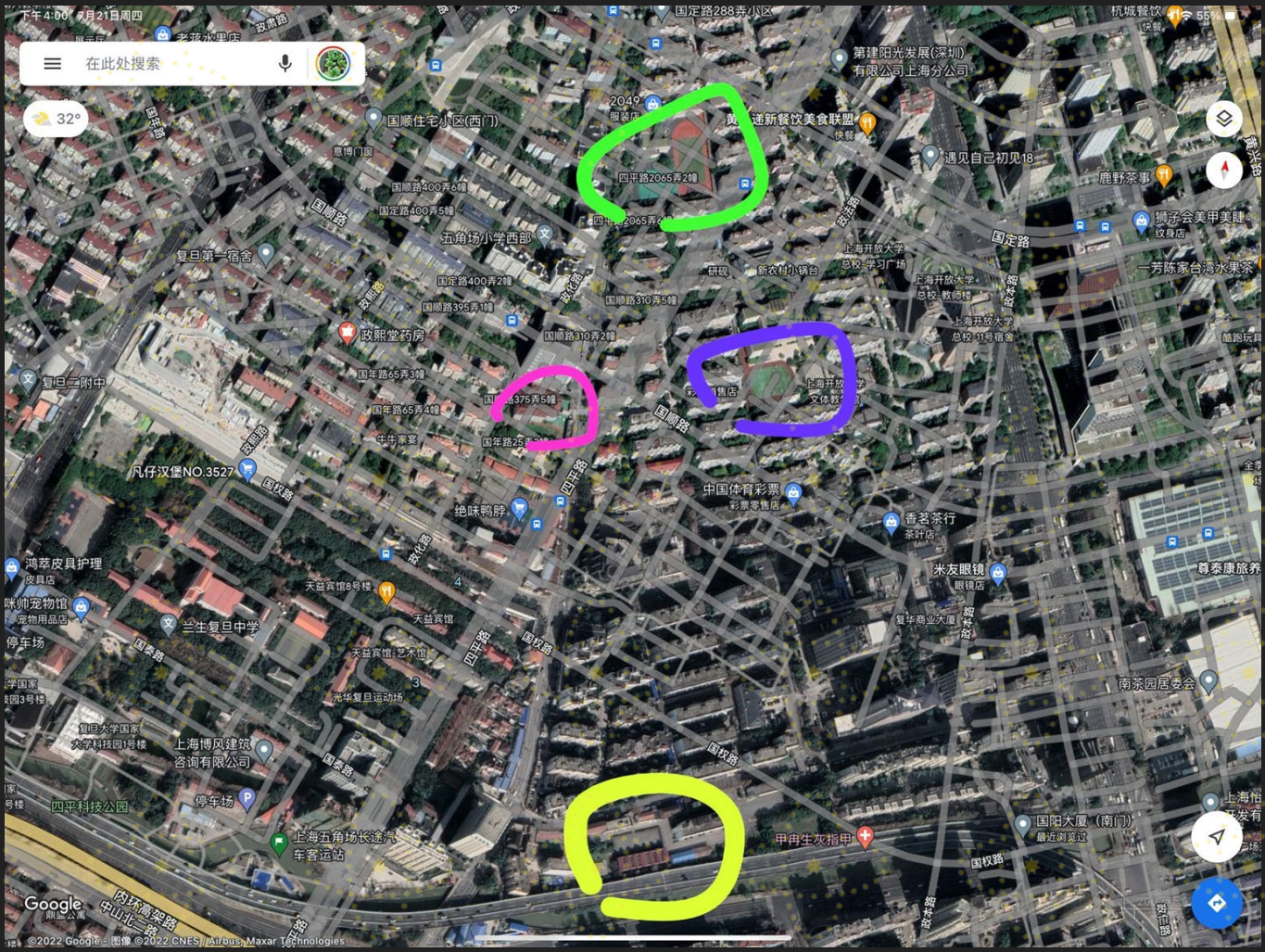






Air Force Lanhong Kindergarten





在此处搜索

32°

Google
© 2022 Google, 图像 © 2022 CNES, Airbus, Maxar Technologies

"Military housing" is a very special form of property, the land is administratively allocated to the military, built by developers, mostly for the troops' own use. Military housing is not under the management of the local government and cannot apply for a property license.

契 税 摘 要	契 税 税 率
以下空白	
附 记	
登记字号	核准日期
填发机关:	

Appendix						
Project Construction Table for Communication and Command & Control System of Shanghai Air Force Underground Command Post						
No.	Project Name	Unit	Quantity	Unit Price (RMB)	Expenditure (RMB10,000)	Notes
	Total				2993.00	
I	Command Post Communication Hub Construction				624.0	
A	Equipment building				135.0	Equipment acquisition expenses
1	Construction of 512-line program-controlled switching system		1.0	450000.0	45.0	
2	128-line digital private exchange system	unit	1.0	600000.0	60.0	
3	Construction of satellite mobile capsule station	set	1.0	300000.0	30.0	
B	Equipment acquisition				525.0	
1	10G optical transmission equipment	set	0.0	900000.0	0.0	
2	2.5G optical transmission equipment	set	0.0	450000.0	0.0	Arrangements have been made in No. 08 Special Project
3	155M optical transmission equipment	set	3.0	150000.0	45.0	
4	Video system construction	set	1.0	160000.0	160.0	
5	Military integrated information network node equipment and classified equipment	set	1.0	800000.0	80.0	
6	PCM specialized line system construction	set	10.0	30000.0	30.0	
7	384 Line Artificial Intelligence Exchange System	set	5.0	90000.0	45.0	
8	Command and control system construction	unit	1.0	500000.0	50.0	
9	Digital Distribution Frame	set	800.0	160.0	12.8	
10	Audio Distribution Frame	set	10000.0	60.0	60.0	
11	Optical wiring frame	set	600.0	40.0	2.4	
12	DC Switching Power Supply	set	1.0	200000.0	20.0	
13	UPS power supply	set	2.0	50000.0	10.0	
14	Storage Battery Pack	set	2.0	50000.0	10.0	
C	Construction expense	unit	1.0	0.2	99.0	
II	Shortwave transceiver station construction				213.0	
A	Equipment building				250.0	Equipment acquisition expenses
1	Shortwave Adaptive Receiver (1000W)	unit	0.0	60000.0	0.0	
2	Shortwave Adaptive Receiver (400W)	unit	20.0	50000.0	100.0	
3	Short-wave integrated service terminal	unit	20.0	60000.0	120.0	
4	Receiving centralized console (16*16)	unit	1.0	300000.0	30.0	

Appendix

Project Construction Table for Communication and Command & Control System of Shanghai Air Force Underground Command Post

No.	Project Name	Unit	Quantity	Unit Price (RMB)	Expenditure (RMB10,000)	Notes
	Total				2993.00	
B	Equipment acquisition				153.0	
1	Three-wire antenna	set	2.0	60000.0	12.0	
2	Cage antenna	set	2.0	60000.0	12.0	
3	Logarithmic Periodic Antenna	set	1.0	350000.0	35.0	
4	Antenna sharers	unit	4.0	8000.0	3.2	
5	Low-loss feeders	km	3.0	70000.0	21.0	
6	AC Distribution Panel	unit	1.0	50000.0	5.0	
7	Lightning protection grounding system construction	unit	1.0	300000.0	30.0	
8	Short-wave broadband fiber optic transmission equipment	set	1.0	350000.0	35.0	
C	Construction expense	unit	1.0	0.2	60.5	
III	Construction of shortwave transmitting stations				627.7	
A	Equipment building				420.0	Equipment acquisition expenses
1	Shortwave Adaptive Transmitter (1000W)	unit	0.0	300000.0	0.0	
2	Shortwave Adaptive Transmitter (400W)	unit	20.0	210000.0	420.0	
B	Equipment acquisition				491.0	
1	622M optical transmission equipment	set	1.0	310000.0	31.0	
2	PCM dedicated line system construction	set	2.0	30000.0	6.0	
3	Three-wire antenna	set	8.0	60000.0	48.0	
4	Cage antenna	set	8.0	60000.0	48.0	
5	Logarithmic Periodic Antenna	set	1.0	350000.0	35.0	
6	Umbrella Cone Antenna	set	1.0	400000.0	40.0	
7	Antenna switching system	set	2.0	450000.0	90.0	
8	Centralized console for sending messages (16*16)	unit	1.0	350000.0	35.0	
9	Low-loss feeders	km	8.0	70000.00	56.0	
10	AC Distribution Panel	unit	1.0	70000.0	7.0	
11	Lightning protection grounding system construction	unit	1.0	600000.0	60.0	
12	Short-wave broadband fiber optic transmission equipment	set	1.0	350000.0	35.0	

Appendix						
Project Construction Table for Communication and Command & Control System of Shanghai Air Force Underground Command Post						
No.	Project Name	Unit	Quantity	Unit Price (RMB)	Expenditure (RMB10,000)	Notes
	Total				2993.00	
C	Construction expense	unit	1.0	0.2	136.7	
IV	Line Construction				413.0	
1	12-core fiber optic cable line acquisition	km	25.0	8500.0	21.3	Transmitting station to Shanghai command post
2	16-core fiber optic cable line acquisition	km	40.0	9500.0	38.0	Main tunnel to Shanghai ground command post, to Chaoyang Telecom Bureau
3	Direct buried fiber optic cable line construction	km	20.0	30000.0	60.0	
4	Direct buried fiber optic cable line construction compensation	km	20.0	5000.0	10.0	
5	Pipeline rental expenses	km	40.0	60000.0	240.0	
6	Construction of various types of cables inside the command post	km	4.0	80000.0	32.0	
7	Construction of various types of fiber optic cables inside the command post	km	3.0	40000.0	12.0	
V	Command and control system construction project				786.0	
A	Network cabling wire				139.0	
1	Category 6 FTP information modules	set	600.0	108.0	6.5	
2	Category 6 FTP cable	set	52.0	4225.0	22.0	
3	Shielded 24-port Express Distribution Frame	set	68.0	1800.0	12.2	
4	Twisted Pair Patch Cords	unit	520.0	130.0	6.8	
5	Fiber Optic Wiring	set	1.0		6.8	
6	Wiring Cabinet	set	7.0	5500.0	3.9	
7	Voice wiring	unit	1.0	60000.0	6.0	
8	Corridor wire channel	set	1200.0	260.0	31.2	
9	Concealed metal line pipe	m	7000.0	9.0	6.3	
10	Ground Cup	set	100.0	280.0	2.8	
11	Construction Auxiliary Materials	set	1.0	150000.0	15.0	
12	Equipment Power Lead-in	set	1.0	100000.0	10.0	
13	Wiring Management System	set	1.0	100000.0	10.0	

Appendix						
Project Construction Table for Communication and Command & Control System of Shanghai Air Force Underground Command Post						
No.	Project Name	Unit	Quantity	Unit Price (RMB)	Expenditure (RMB10,000)	Notes
	Total				2993.00	
B	Display control wire				83.7	
1	Video Cables	m	1500.0	10.0	1.5	
2	5-in-1 composite video cable	m	6000.0	82.0	49.2	
3	Single-channel audio cable	m	25000.0	5.0	12.5	
4	Four-core control cable	m	6000.0	5.0	3.0	
5	Microphone Line	m	2000.0	10.0	2.0	
6	Speaker Cable	m	500.0	8.0	0.4	
7	DCN Cable	m	300.0	50.0	1.5	
8	Power cord for camera	m	12000.0	3.0	3.6	
9	Specialized Connectors	set	1.0		10.0	
C	Network test instruments and construction tools	set			51.0	
1	Category 6 Digital Cable Analyzer	set	1.0	6000.0	0.6	
2	Distributed Network Analyzer	set	1.0	180000.0	18.0	
3	Pigtail fusion splicer	set	1.0	210000.0	21.0	
4	Fiber optic hot melt tool	set	1.0	14000.0	1.4	
5	Video Cable Test System	set	1.0	28000.0	2.8	
6	BNC Tools	set	1.0	15000.0	1.5	
7	Label Printer	set	1.0	25000.0	2.5	
8	Auxiliary tools	set	4.0	8000.0	3.2	
D	Wiring Construction Expenses	set	1.0	0.3	67.7	
E	Network Subsystem				200.0	
1	Equipment acquisition expenses				2000.0	Specialized equipment acquisition expenses
2	Equipment installation expenses	unit		0.1	200.0	
F	Display Control Subsystem				170.0	
1	Equipment acquisition expenses				1700.0	Specialized equipment acquisition expenses
2	Equipment installation expenses	unit	1.0	0.1	170.0	

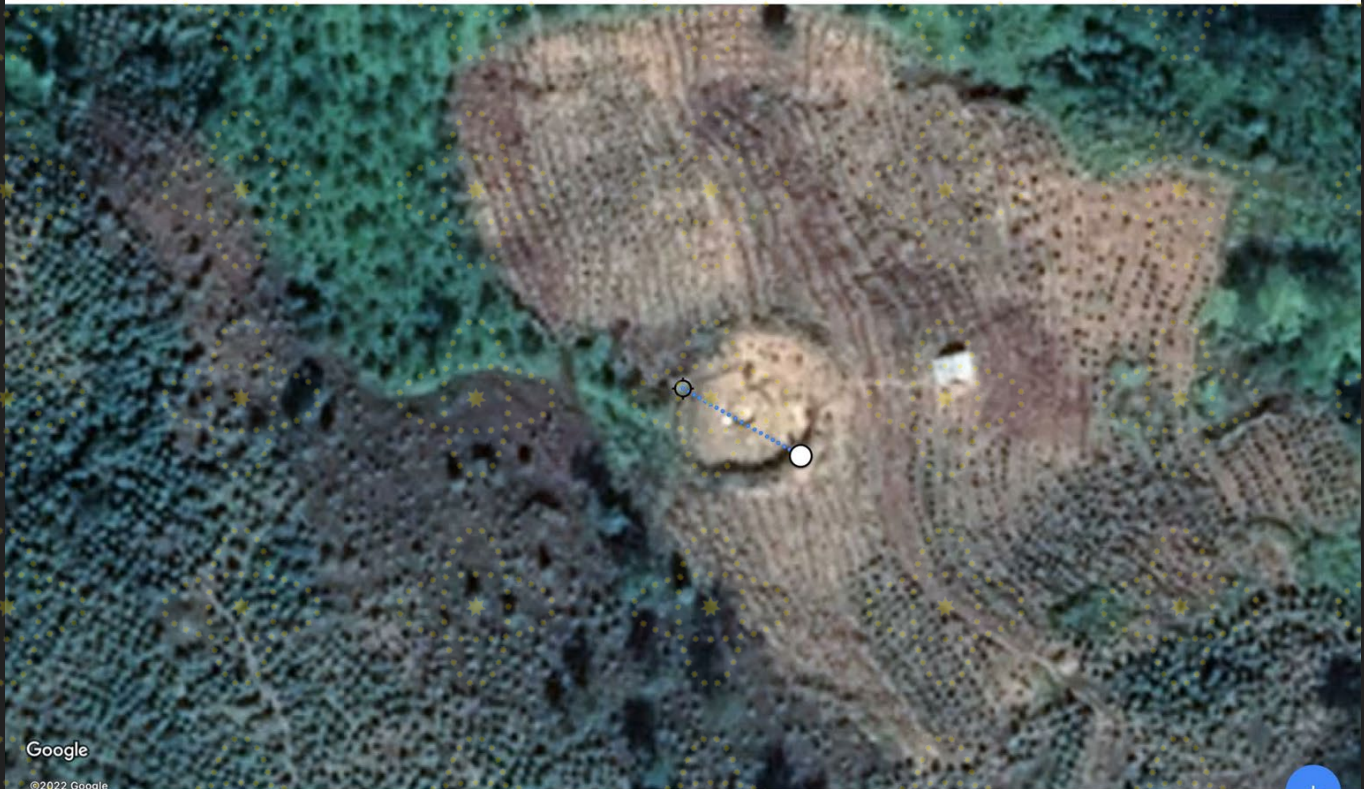
Appendix

Project Construction Table for Communication and Command & Control System of Shanghai Air Force Underground Command Post

No.	Project Name	Unit	Quantity	Unit Price (RMB)	Expenditure (RMB10,000)	Notes
	Total				2993.00	
G	Security and confidentiality systems				15.0	
1	Equipment acquisition expenses				150.0	Specialized equipment acquisition expenses
2	Equipment installation expenses	unit	1.0	0.1	15.0	
H	System Integration expenses	unit	1.0		60.0	
VI	Other expenses for engineering and construction				186.5	
1	Survey and design expenses	unit		0.0	53.3	
2	Project supervision expenses	unit		0.0	53.3	
3	Construction unit management expenses	unit		0.0	79.9	
VII	Budgetary reserves	unit	1.0	0.1	142.5	

测量距离

拖动地图，然后点按“添加控制点”。



Google

©2022 Google

20 米



添加控制点

测量距离

拖动地图，然后点按“添加控制点”。



Google

©2022 Google

10 米



添加控制点



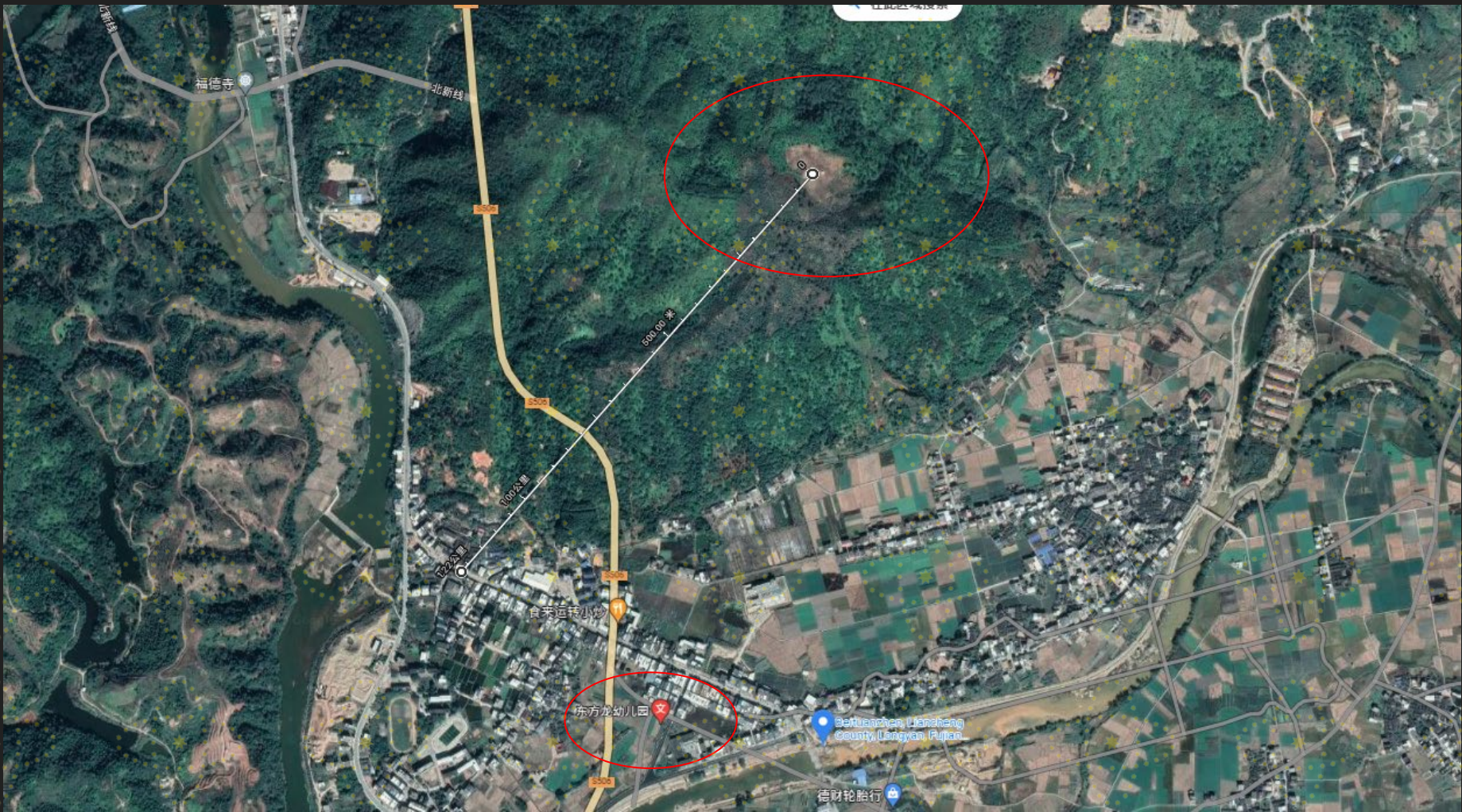
摩尔网 www.cgmol.com NO.20190111114543296



摩尔网 www.cgmol.com NO.20190111114545766



摩尔网 www.cgmol.com NO.20190111114544333



新佛寺

北新线

8000.00米

1000.00米

食菜运转小站

东方幼儿园

Baituanzhen, Liancheng County, Longyan, Fujian

德财轮胎行



Dongfang Long Kindergarten

东方龙幼儿园

1