Hunter Communications Inc. CASF Broadband Infrastructure Grant Application

Project Summary

Applicant's Name:	Hunter Communications Inc.
CPCN/U:	U-7281-C
Project Title:	**Mendocino County Project 1**
Named Project Location:	Mendocino County Round Valley/Covelo/Dos Rios, Laytonville, Willits, Hopland, Ukiah, Talmage, Calpella, Redwood Valley, Yorkville, and Potter Valley and surrounding areas
Project Type:	Last Mile
CASF Grant Funding Request:	$290,327,940
Project Cost:	$290,327,940
Contact Person:	Keith Grunberg, Director of Business Services 801 Enterprise Drive Center Point, OR 97502 Mobile: (503) 819-7885 Fax: (541) 727-3066 kgrunberg@hunterfiber.com

UNSERVED HOUSEHOLDS INCLUDED IN GRANT REQUEST	
COMMUNITY	**CASF ELIGIBLE HOUSEHOLDS-TARGETED**
COVELO	970
HOPLAND	515
LAYTONVILLE	790
WILLITS	1,466
UKIAH	1,084

TALMAGE	19
CALPELLA	63
REDWOOD VALLEY	480
POTTER VALLEY	483
TOTAL	**5,870**
Speed Mbps Offered	The maximum Mbps downstream and upstream speed currently offered to households Under 6Mbps downstream and 1Mbps upstream.
Median Household Income	With a total weighted average median Household Income of $46,552
Estimated Number of Businesses, anchors and Public safety locations:	There are 24 anchor institutions, schools and health facilities that could benefit with new services or improved speeds. We have not included public safety until we sort out how this all works with the FirstNet initiative. Eighty-two (82%) of the 5,000 businesses in the County have nine (9) or fewer employees. We are working with the West Company Business Center to identify the businesses in the nine community areas.

Description of major infrastructure to be deployed:

The project provides high-speed Internet, delivered over fiber optic cable to 5,870 premises (Households-HHs) in nine communities and surrounding areas including: Round Valley/Covelo/Dos Rios, Laytonville, Willits, Hopland, Ukiah, Talmage, Calpella, Redwood Valley and Potter Valley. A total of 919.56 miles of 100% underground fiber routes are being deployed across these nine areas creating a seamless distribution system, consisting of core arteries and distribution, last-mile and drops which we will collectively refer to as "Last-Mile" for the remainder of the document. The last-mile fiber drops to at least 90% of the 5870 (5283) households, at an average of 300 feet per household, adds another 300 miles. This includes three Central Offices for backhaul which 3 Huts will be for fiber aggregation. Plans are to construct 15 remote XPON cabinets and 12 fixed wireless towers for WiFi access and space for WISP/Wireless for Carrier access.

Also, there are twelve (12) locations, one in each community, where stand-alone towers are being placed to provide fixed wireless access, via WISPs, to reach up to 10% of the outlying households, or 587.

The fiber design calls for deploying as much fiber underground as possible to preserve infrastructure during wildfires and other unforeseen disasters. According to an assessment by Magellan Advisors for Napa County 30 percent of the telecommunications infrastructure was damaged by the 2017 wildfires. None of the underground infrastructure was damaged.

Breakdown of Aerial and Underground installation:	Ninety (90%) percent of the Households, 5283, are estimated to be connected via underground fiber installation and up to Ten (10%) percent, 587 households, via fixed wireless, pending more detailed design after the grant award.
Major Equipment Expenses	Major equipment expenses from Nokia/Ciena Juniper/META will include: 12 Wireless Stand-alone Towers 72 Wireless Antennas 7 Shelters (12' x 20") 6 Backup Generators 20 144 Fiber Termination Panels with Connectors 1 Media Gateway with TDM Capability 1 VM Stack for EAS, MV, N Series and SAS 7 Core Routers 4 10 Gbps Optical Transmit/Rcvrs w/4" ROADMs 15 Edge Routers 15 GPON Cabinets 330 XPON OLT Ports 245 XPON OLCs 1321 XPON Splitters 1321 Hand Holes/Pull Boxes 5870 XPON ONTs w/Router, Battery 587 Wireless HH Antennas and Radios 1219 Miles of Conduit and 144 ct Fiber 4888 Vaults and Splice Cases 4855 Pull Boxes
Estimated construction timeline:	The deployment schedule assumes a start date of January, 2021 and a completion date of June, 2025, or a total of 42 months from start to finish, including time to process all necessary permits.

Description of proposed broadband project plan:
The Hunter fiber approach is to provide up to 1 Gbps symmetrical Internet connectivity and voice service to all 5,870 homes, plus businesses, anchors, and other institutions in the nine community areas via a robust XPON fiber network, augmented by fixed wireless to reach the more remote households. These nine community areas include several Native American Tribes including: Round Valley Tribes and Reservation (Round Valley/Covelo), Cahto Tribe and Rancheria (Laytonville), Sherwood Valley Pomo Tribe and Rancheria (Willits), Potter Valley Tribe (Potter Valley), Pomo Tribe (Redwood Valley), Coyote Valley Band of Pomo Indians (Redwood Valley), Pinoleville Pomo Nation (Ukiah), Guidiville Rancheria (Ukiah) and the Hopland Band of Pomo Indians (Hopland).

Hunter has designed and will build and operate the network by providing all the necessary equipment to light the network. Our primary goal is to provide a reliable high-speed Internet network to the all potential users in the communities at a competitive price, encouraging economic development, providing excellent customer service and doing so it in a manner that minimizes risk.

Hunter's design calls for the FTTx XGS PON Technology network to utilize a passive optical network for residential and small business, and Active Ethernet for larger businesses, cell towers, and WISP's. Hunter will utilize this hybrid approach to create a state-of-the-art network designed with the future in mind. This do it right approach will take into consideration minimizing downtime caused by wildfires, future bandwidth needs, and future technological advancements.

Each of the nine community areas are planned to have either a hut or cabinet based upon size of the community; these locations will service as the aggregated data center where the last-mile distribution system where we plan to place fiber terminals, core and edge routing, and Optical Line Terminals (OLT) and where the infrastructure will be extend via fiber drops to connect the households.

For larger businesses and tower locations we will provision for either a dark fiber or lit service using traditional industry interconnection equipment (small router). Our intent is enable wireless carriers to build out their networks to further enhance voice and data connectivity to this rural and neglected area.

<u>Download</u> speed capabilities of proposed facilities:	The maximum residential service **Download** speeds customers may subscribe to are: **1000 Mbps.**
<u>Upload</u> speed capabilities of proposed facilities:	The maximum residential service **Upload** speeds customers may subscribe to are: **1000 Mbps.**

Preliminary indication of need for CEQA review:	Hunter has contacted the Commission's Energy Division CEQA section in advance of filing this application and has consulted with CEQA Staff regarding the process of developing and filing a Proponent's Environmental Assessment (PEA) or other CEQA documents. Hunter is aware of its responsibilities if this proposed project is not exempt from CEQA. Hunter anticipates that parts of the project will require CEQA review and other parts will not which will also be identified by CalTrans.

Benefits of Project

Resilience - By deploying fiber underground, as opposed to aerial, this Last-Mile Distribution System will be better protected against wildfires, other unforeseen disasters and outages.

Tribes - In addition to providing broadband access to 5,870 households this project would also be serving the needs Native American Tribes located within the project area including: Round Valley Tribes and Reservation (Round Valley/Covelo/Dos Rios), Cahto Tribe and Rancheria (Laytonville), Sherwood Valley Pomo Tribe and Rancheria (Willits), and Hopland Band of Pomo Indians (Hopland).

Low-Income - With a total weighted average median Household Income of $46,552, this project is serving a population that is well below the $51,500 CASF standard. According to official CPUC data this project serves 2,725, or 46.4% of the households are considered below 200% of Federal Poverty. This project provides broadband services to these qualified households at $14.99 per month for 25 Mbps download and upload speeds.

No Service - Based on the official 2019 CPUC Data Availability and Mapping Report, there are no providers currently serving Round Valley/Covelo/Dos Rios with 970 targeted Non-Served households.
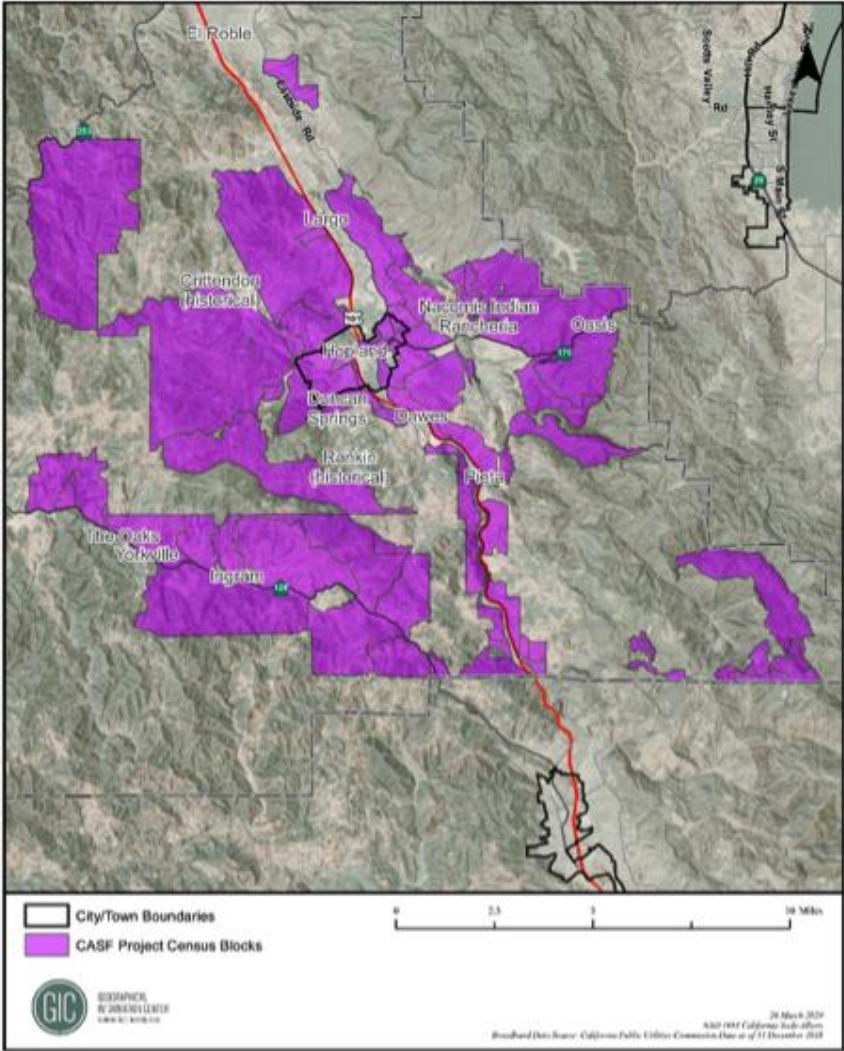
Closing the Digital Divide - Finally, this project makes a significant contribution to the NBNCBC region achieving the State's 98% access goal for all regions throughout the state.

MAPS OF THE PROPOSED PROJECT AREA

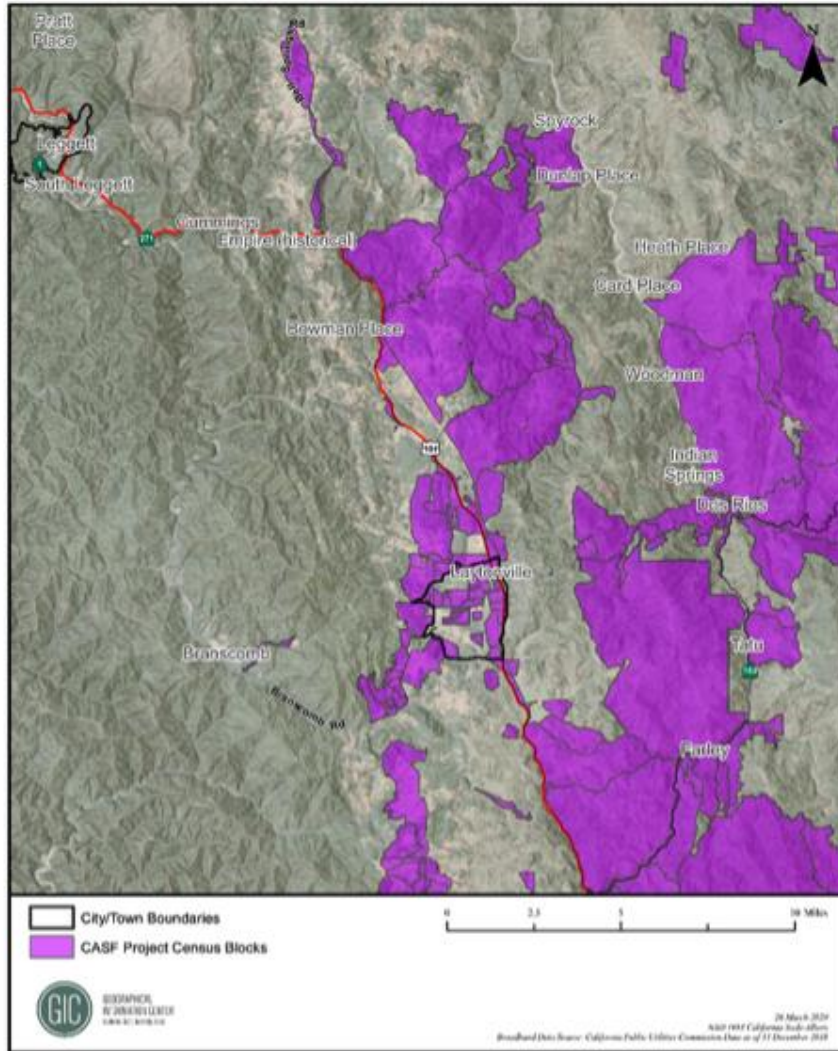## Mendocino County - Project 1

Project 1 - Phase 1   Project 1 - Phase 2
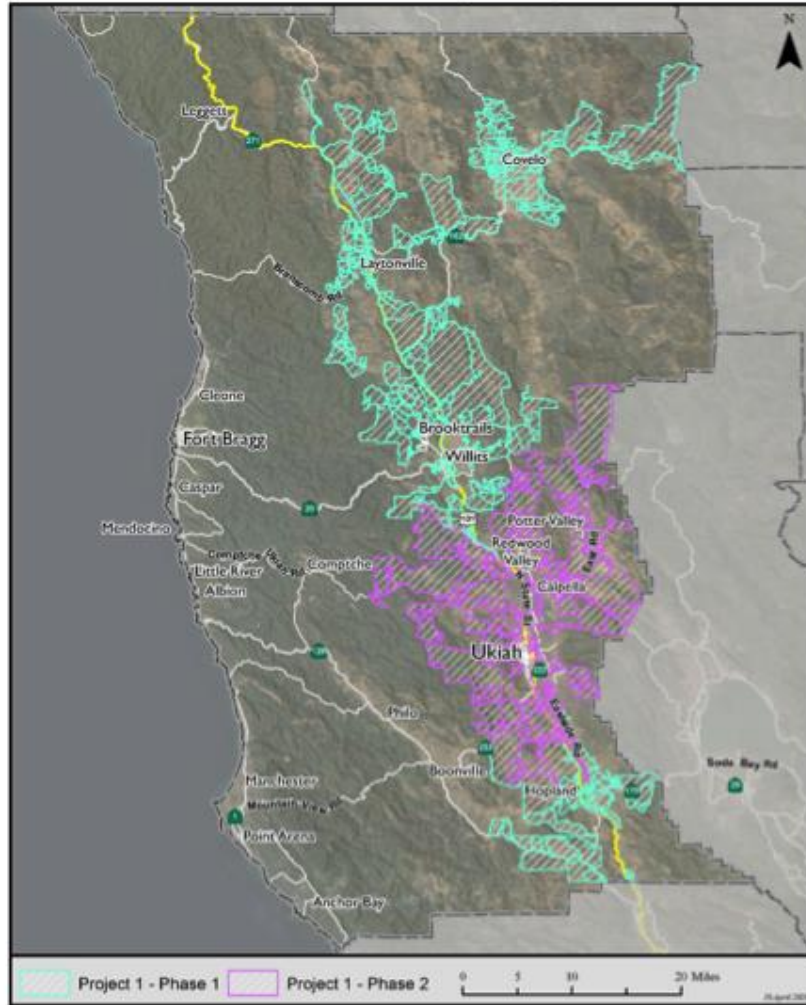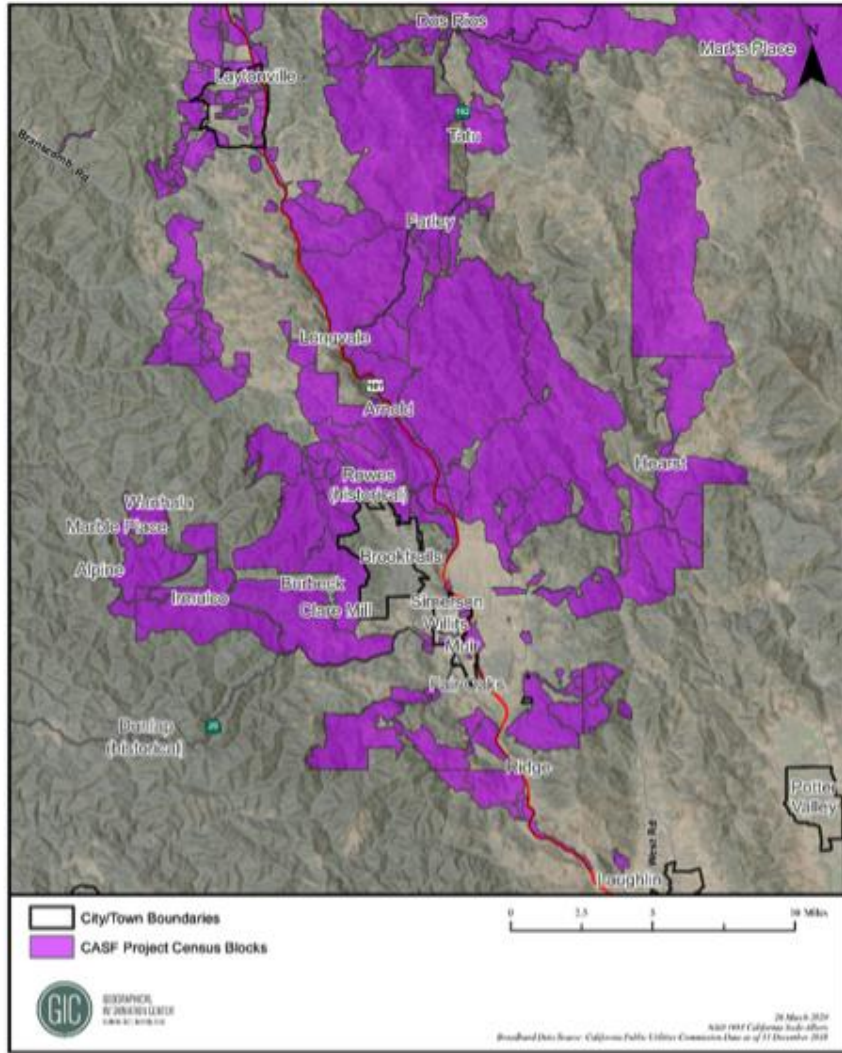
CASF Project Mendocino County- Hopland

CASF Project Mendocino County- Laytonville

8

CASF Project Mendocino County- Willits

CASF Project Mendocino County- Covelo
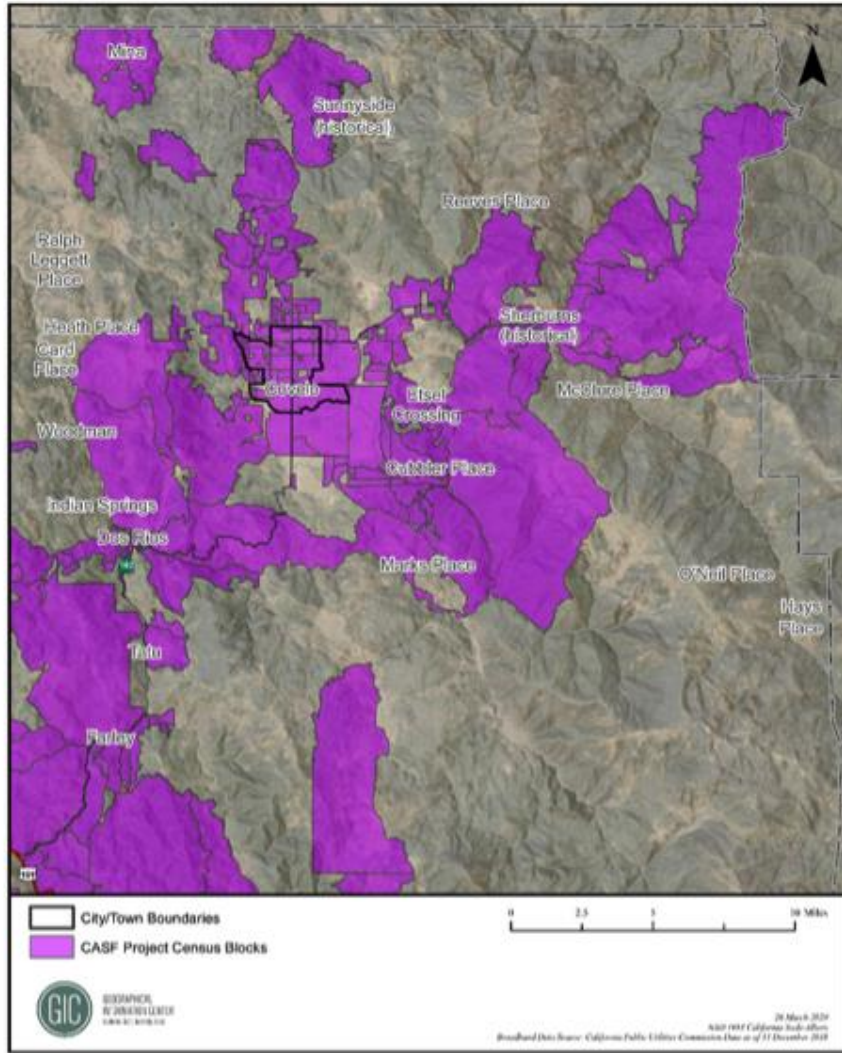
Zip Codes

93514	95482
95428	95418
95429	95481
95417	95418
95454	95470
95490	95469
95449	95494

Census Blocks

060450101003058	060450102005076
060450101003075	060450118001404
060450118002085	060450118002005
060450107001008	060450101003072
060450106001013	060450101003031
060450106001052	060450101001416
060450106001070	060450101001450
060450106004036	060450101001317
060450101003052	060450101001198
060450101001676	060450101003030
060450101001403	060450118001109
060450101002022	060450118001108
060450101003060	060450101003017
060450101003018	060450101001769
060450101001768	060450101001215
060450101002032	060450101003000
060450101003029	060450101001449
060450101003062	060450101001277
060450102001034	060450118002021
060450101001232	060450101001693
060450101001784	060450101003054
060450101003038	060450102004117
060450101003040	060450102005046
060450101001704	060450101001677
060450101002000	060450101001191
060450101003028	060450118002055
060450118002067	060450118001147
060450102001054	060450118001202
060450101001432	060450118002041
060450118001414	060450118001092
060450118002072	060450101003046
060450102005007	060450101002051
060450102005009	060450102001078
060450102001168	060450102001156

060450102001167   060450106002004
060450101003014   060450106002006
060450102004107   060450101002005
060450101003041   060450101002057
060450102004056   060450101002003
060450101002059   060450102005005
060450101003036   060450102005015
060450118001132   060450102005035
060450118002006   060450118001066
060450118002070   060450118001182
060450101002029   060450102005008
060450102005066   060450102005075
060450102001068   060450101003032
060450101003039   060450101003034
060450101003035   060450102005020
060450101001688   060450102004138
060450101003045   060450102004136
060450101002049   060450102005053
060450102005029   060450106004018
060450102004142   060450106001028
060450102004179   060450106004016
060450102004081   060450106004077
060450102001171   060450106001175
060450102005030   060450106001116
060450106001163   060450107001015
060450106002000   060450102005060
060450108011127   060450102004178
060450102005069   060450101002020
060450102001094   060450101001767
060450118001028   060450101001764
060450102004109   060450102001130
060450102004116   060450102001153
060450102005027   060450102005033
060450102001058   060450101001218
060450101001772   060450102004133
060450101001766   060450107007007
060450101002046   060450107003027
060450101001697   060450106001106
060450101001740   060450102001004
060450101001714   060450108011065
060450101001765   060450107002006
060450102005017   060450107004009
060450106002005   060450106004057
060450102002368   060450106001041

060450106001136
060450106001036
060450118001091
060450118001162
060450118002027
060450118001154
060450102005043
060450106002013
060450106001027
060450106001024
060450106001042
060450106001032
060450102004166
060450102004165
060450102004277
060450102001065
060450101002009
060450101002010
060450101002011
060450101001683
060450101001797
060450101002031
060450102004156
060450102001157
060450102001079
060450102005062
060450102001160
060450106001004
060450106001124
060450106004091
060450107001011
060450107004019
060450106004059
060450107005002
060450106001206
060450106001015
060450106001212
060450106001083
060450118002009
060450102004261
060450102004275
060450107003008
060450107002043
060450107005008

060450107007020
060450107003013
060450102005061
060450102004158
060450102005026
060450106001043
060450107007000
060450106004209
060450106004056
060450106001219
060450101003059
060450101002026
060450101001743
060450101001314
060450106004047
060450102001090
060450102001064
060450102004040
060450102004270
060450106001077
060450106001067
060450106001011
060450106001108
060450106004223
060450118002077
060450102005068
060450102002366
060450106001065
060450106001081
060450106001126
060450106001104
060450106001048
060450106002001
060450107005016
060450106004046
060450106004083
060450106003023
060450101003084
060450101003056
060450101003057
060450101002016
060450101002008
060450101002024
060450102004282

060450102004291   060450102004115
060450102001012   060450102005047
060450106004210   060450102001063
060450106004191   060450102004272
060450107005004   060450102001010
060450106004217   060450102004121
060450107007024   060450102005048
060450102004274   060450102004124
060450102004281   060450106004240
060450106004188   060450106004053
060450106004229   060450101002025
060450107007023   060450101002027
060450106004013   060450101002021
060450107005006   060450101002054
060450106004225   060450118001084
060450106003011   060450102004264
060450118002042   060450102005051
060450102005000   060450102005041
060450102001096   060450102004149
060450102004113   060450106001014
060450106004205   060450106004216
060450106004208   060450106004227
060450106001088   060450106004241
060450108011132   060450102001018
060450106001099   060450102001087
060450107002032   060450102001013
060450106004079   060450108011090
060450106001073   060450101002036
060450106001044   060450101001222
060450106003015   060450101001742
060450106004010   060450101001551
060450106001089   060450118001103
060450101001197   060450102001097
060450101002007   060450102004125
060450101002058   060450106001133
060450101001700   060450106004092
060450101001356   060450106003012
060450101003055   060450102002378
060450118001307   060450106004021
060450118002019   060450106001049
060450118002022   060450106001082
060450118001121   060450106002003
060450118001029   060450101001183
060450102004120   060450101003065

060450101001803 060450102004263
060450118001128 060450102005050
060450118001286 060450102005078
060450118001306 060450102001155
060450101002030 060450102005010
060450101001415 060450102005049
060450118002069 060450102004176
060450118002017 060450102002385
060450118001125 060450102001089
060450118002079 060450101001345
060450102004139 060450118002016
060450102005074 060450118001328
060450102001060 060450106004049
060450102005003 060450101001366
060450106001142 060450118002051
060450106001109 060450118002083
060450107002042 060450118001122
060450118001085 060450118002030
060450118001044 060450101001771
060450118002043 060450101001344
060450118002011 060450101002004
060450118002050 060450101001221
060450118002052 060450102001082
060450102001061 060450106001107
060450101001760 060450106001003
060450101001408 060450106004032
060450101001417 060450106001087
060450101002002 060450106001092
060450101002035 060450106001103
060450101002028 060450106004085
060450101001361 060450102005028
060450101001710 060450101001360
060450118001341 060450101002001
060450102004276 060450101002055
060450107007006 060450101003010
060450106004031 060450101003026
060450106004029 060450101001347
060450107001010 060450118001300
060450106001140 060450102004175
060450102002367 060450102005034
060450107004020 060450101002006
060450107006018 060450101001758
060450107006019 060450101002013
060450118001351 060450101003049

060450101001706
060450101001675
060450102004108
060450102005004
060450106004035
060450106004243
060450101001397
060450118002020
060450118002045
060450102005040
060450102004302
060450102001101
060450106004086
060450106001217
060450106001176
060450118001304
060450118001097
060450102004185
060450102001020
060450102004172
060450102005023
060450102005021
060450102005058
060450118002068
060450118002018
060450101001405
060450101001407
060450101001452
060450101001737
060450102004051
060450102005038
060450102005025
060450102005037
060450102004134
060450102004118
060450101003021
060450106004189
060450106004204
060450106004185
060450107007001
060450107004013
060450107006020
060450106001141
060450107002046

060450106004000
060450106004017
060450118001138
060450118002013
060450118002073
060450118001105
060450102004123
060450118002058
060450118001006
060450118001150
060450101001786
060450106004098
060450106004080
060450106001080
060450106001102
060450102001028
060450102005059
060450106001005
060450106001086
060450106004206
060450106001151
060450106004218
060450102001091
060450106001173
060450106004226
060450107001003
060450106004008
060450106004182
060450106003020
060450106003010
060450106001143
060450118001094
060450118001063
060450118001101
060450118001397
060450118001098
060450118002015
060450102002377
060450102001172
060450107007019
060450107001019
060450106004002
060450107001001
060450101001699

060450118002010
060450101003011
060450101003061
060450101001757
060450101003079
060450101001190
060450118001130
060450118001327
060450102005036
060450101001721
060450101001451
060450118001198
060450118001027
060450102001081
060450102004122
060450102005070
060450101001633
060450118001142
060450102004110
060450101001434
060450118001137
060450118001134
060450118001181
060450118002008
060450118002000
060450118001107
060450101001400
060450102004260
060450101001679
060450102004103
060450102004105
060450102005024
060450101001363
060450101001225
060450101003033
060450101003037
060450102004174
060450102004184
060450102005002
060450102005011
060450102005014
060450102001158
060450101001681
060450101002038

060450101002060
060450101001691
060450102001050
060450102005057
060450101002014
060450101001318
060450101003086
060450101002047
060450106004103
060450106001131
060450106003029
060450102004265
060450107003028
060450106003017
060450107003033
060450107006017
060450102001042
060450102001041
060450102001123
060450102001122
060450102001135
060450102001133
060450102001052
060450102001051
060450102001132
060450102001117
060450102001128
060450101001327
060450102001098
060450102001126
060450108022015
060450117001013
060450118001047
060450113001041
060450113002017
060450118001041
060450109004008
060450108013056
060450109002072
060450109001057
060450115005018
060450109001036
060450117001012
060450115001012

060450117001029	060450117001143
060450109001144	060450116001053
060450117001130	060450117004021
060450113003024	060450109004017
060450117001142	060450108021062
060450113003060	060450108021004
060450117005062	060450108021130
060450109001134	060450108021043
060450108013047	060450108021041
060450108014088	060450116003031
060450109002016	060450109003014
060450115002003	060450109003091
060450109001205	060450109003084
060450109001052	060450117001119
060450108013069	060450113001014
060450113002095	060450117002028
060450117001108	060450108011134
060450117005050	060450106002049
060450113003015	060450106002061
060450118001009	060450118001036
060450108011052	060450118001042
060450108011106	060450118001062
060450108014036	060450108021007
060450108013058	060450108021034
060450109003023	060450108021080
060450109003018	060450113003063
060450109003019	060450117005047
060450108011109	060450116003027
060450108013063	060450117001120
060450108021134	060450108021039
060450108022042	060450113002104
060450109001105	060450113003019
060450109002006	060450108013068
060450109002023	060450108021124
060450117002011	060450108021119
060450117001146	060450113003100
060450113003095	060450109001164
060450114003019	060450108011013
060450109001046	060450108011012
060450109001050	060450113003089
060450108013049	060450108022055
060450108013072	060450108013014
060450113003069	060450108022021
060450113003085	060450109003070

060450109001047
060450108011050
060450117001049
060450106001110
060450108021027
060450108021074
060450108021076
060450117005049
060450109001011
060450109001019
060450109001029
060450108022016
060450117002021
060450117001032
060450114003023
060450108011055
060450108021099
060450108021125
060450113003018
060450117001153
060450114003017
060450117004033
060450117001103
060450118001033
060450108022011
060450108022017
060450108022049
060450108014032
060450108013050
060450108011092
060450109003011
060450117001067
060450117001150
060450108012009
060450108022053
060450108021068
060450108022045
060450109001061
060450108011063
060450108011100
060450108022051
060450113003093
060450113003071
060450113002005

060450109001141
060450108013054
060450109002082
060450108013022
060450108014072
060450108022036
060450108011061
060450108022035
060450106002014
060450113002105
060450109001147
060450108022063
060450108021084
060450108021111
060450109001068
060450108011054
060450108022025
060450108013010
060450108014069
060450108011045
060450106002010
060450108022064
060450108021108
060450108022070
060450108021069
060450115002025
060450113001052
060450113001032
060450109003098
060450108013024
060450108013046
060450108013043
060450109001187
060450115005011
060450113003075
060450108013021
060450108022020
060450108022028
060450108022068
060450108021056
060450108013003
060450108013065
060450109001067
060450109001163

060450109002064
060450109002021
060450108011108
060450108011002
060450108013025
060450108013075
060450113003088
060450116003030
060450116001042
060450109003021
060450108021035
060450108021050
060450108011005
060450109001101
060450109003040
060450117005058
060450113003020
060450113001019
060450117002043
060450113003092
060450108013016
060450108021117
060450108011073
060450109001000
060450108011060
060450108012017
060450108022072
060450118001398
060450109001031
060450108011062
060450108021100
060450113003087
060450108014068
060450108011125
060450113002013
060450113003067
060450113003062
060450113002065
060450113002004
060450117002034
060450108012008
060450108011043
060450108013037
060450109003030

060450108011008
060450108022059
060450108012018
060450108022018
060450109001045
060450109003035
060450106002018
060450118001043
060450118001046
060450108022066
060450108012011
060450108022062
060450108021081
060450108022013
060450109001199
060450108014083
060450109001025
060450108011035
060450117001048
060450117002023
060450117005020
060450116003017
060450108013026
060450108013073
060450115001023
060450108011000
060450108014070
060450108011057
060450109002010
060450109004006
060450109004003
060450108013066
060450108013064
060450109003029
060450108011058
060450108022037
060450106004196
060450108022019
060450108022050
060450108013008
060450108022060
060450108022043
060450118001034
060450108022005

060450108011046
060450109001127
060450108021135
060450108013055
060450109002086
060450109003104
060450109003031
060450108011081
060450108011064
060450108021058
060450117001005
060450117001001
060450108013030
060450108013082
060450113002010
060450106004192
060450108021085
060450108022022
060450106002015
060450109001206
060450109001161
060450108011083
060450108011053
060450108011082
060450108012014
060450108021038
060450109001020
060450109004005
060450114003014
060450115005010
060450117001155
060450117001156
060450109003036
060450108012007
060450108011075
060450106002058
060450109001193
060450109001092
060450109001038
060450109003012
060450108011118
060450113002092
060450113002053
060450117004022

060450113003033
060450117005033
060450117005034
060450117005041
060450118001061
060450118001018
060450117001027
060450117001112
060450117004030
060450117004014
060450108022032
060450108011010
060450109004030
060450108014012
060450109001002
060450117005036
060450113003091
060450113001021
060450106002016
060450113003028
060450113003059
060450113003098
060450113003029
060450118001038
060450117004023
060450117001116
060450117004001
060450113002096
060450116003011
060450108013062
060450106004195
060450106002060
060450117003012
060450117002030
060450118001045
060450118001056
060450117001028
060450117001025
060450113002093
060450118001060
060450118001055
060450117005040
060450117005045
060450117005037

060450117005046
060450108022038
060450108022069
060450108021059
060450109001157
060450108014021
060450109003102
060450108022039
060450108014065
060450108021045
060450108014011
060450109002041
060450108013028
060450108013053
060450108011080
060450117001003
060450117001026
060450117001138
060450118001020
060450114004013
060450116001052
060450118001059
060450117004016
060450115005000
060450118001014
060450113003037
060450117005024
060450113003070
060450117005065
060450109001044

060450109001140
060450109002046
060450109002066
060450109002037
060450116003032
060450117001147
060450117001118
060450117002010
060450109003071
060450108011009
060450108011059
060450106001177
060450108021042
060450108021075
060450109003016
060450108021105
060450106002062
060450108011079
060450109001021
060450109001024
060450109001012
060450108022027
060450106002017
060450108011121
060450108013012
060450108014063
060450108013080
060450108021060
060450108021057