

A statewide street address composite geocoding service is available at [https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer)

## Background

The Addr\_NJ\_cascade geocoding service is regularly updated with addresses from both the NJ Address Points & NJ Road Centerlines datasets. This service allows for general geocoding and reverse geocoding for street address and road intersection locations.

## Matching Hierarchy:

- >Address Point Street Addresses
  - v Road Range Street Addresses
  - v Road Intersections

## Supported operations (request types):

### Find Address Candidates

[https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer/findAddressCandidates](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer/findAddressCandidates)

\* Find possible address candidates for a single address

### Reverse Geocode

[https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer/reverseGeocode](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer/reverseGeocode)

\* Enter a location in x/y coordinates (different coordinate systems supported), and receive the closest address with coordinates.

### Geocode Addresses (1 Or Many)

[https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer/geocodeAddresses](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer/geocodeAddresses)

\* Batch geocode 1 or many addresses at one time (up to 1000). Each address will automatically match to the best candidate in the preferred hierarchy (point->road range).

## Find Address Candidates



- Use either parsed address variables (**Street, City, State, ZIP**) or concatenated address (**SingleLine**)
- Use **\*** as the input for the Out Fields variable to ensure all output fields are returned (**outFields**)
- All addresses are returned by default in NJ State Plane coordinates. If requiring Latitude/Longitude coordinates, use the code 4269 in the Output Spatial Reference (**outSR**)
- Use JSON for the Format (**f**) variable to return the candidates in pjson

### Example using URL Parameters:

[https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer/findAddressCandidates?Street=125+W+State+St&City=Trenton&State=NJ&ZIP=08608&SingleLine=&category=&outFields=\\*&maxLocations=&outSR=4269&searchExtent=&location=&distance=&magicKey=&f=pjson](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer/findAddressCandidates?Street=125+W+State+St&City=Trenton&State=NJ&ZIP=08608&SingleLine=&category=&outFields=*&maxLocations=&outSR=4269&searchExtent=&location=&distance=&magicKey=&f=pjson)

### Example JSON request body:

```
{  
  "SingleLine": "125 W State St Trenton, NJ 08608",  
  "outFields": "*",  
  "outSR": "4269",  
  "f": "pjson"  
}
```

### Searching for Road Intersections:

- Use the SingleLine parameter as input.
- At a minimum include a city or zip code after the intersection name
- The following are acceptable intersection connectors: **& @ | and at**
- Example:** "SingleLine": "Vandeventer Ave & Nassau St, Princeton, NJ 08542",

## Find Address Candidates

### Response Information

\*Candidates are returned in order of scoring hierarchy

-**location (X/Y)** – gives the coordinates in the requested output coordinate system

-**score** – score of the candidate (0-100). 85 is required as a minimum match score

-**attributes-Match\_addr** – the address that the input address was matched to

-**attributes-Loc\_name** – the address locator that the address was matched to

-> 'Addr\_NJ\_pt\_mc' (Matched to an address point)

-> 'Addr\_NJ\_pt\_sub' (Matched to a subaddress point)

-> 'Addr\_NJ\_road' (Geocoded to a road centerline range)

-**attributes-Addr\_type**– type of address that was matched ( either StreetInt or StreetAddress)

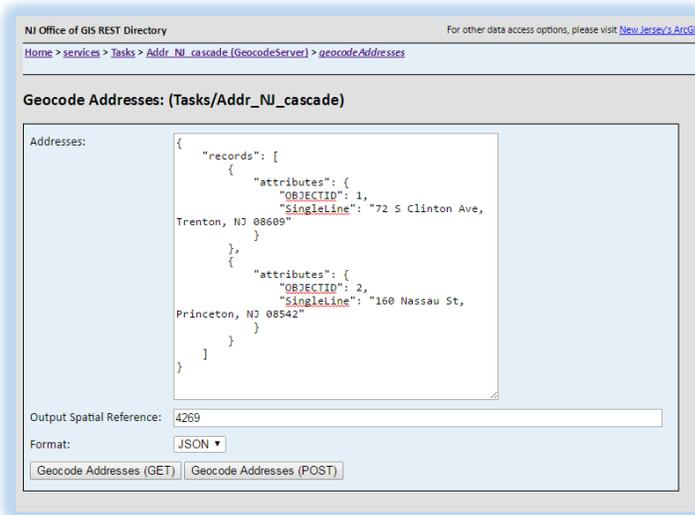
### Example JSON response body:

```
{ "spatialReference": {
  "wkid": 4269,
  "latestWkid": 4269
},
  "candidates": [ {
    "address": "125 East State Street, TRENTON, NJ, 08608",
    "location": { "x": -74.763168465793626,
                  "y": 40.220093105346265 },
    "score": 90.870000000000005,
    "attributes": {
      "Loc_name": "Addr_NJ_pt_mc",
      "Score": 90.870000000000005,
      "Match_addr": "125 East State Street, TRENTON, NJ, 08608",
      "House": "125",
      "PreDir": "East",
      "PreType": "",
      "StreetName": "State",
      "SufType": "Street",
      "SufDir": "",
      "BldgSubAddrType": "",
      "BldgSubAddrUnit": "",
      "SubAddrType": "",
      "SubAddrUnit": "",
      "City": "TRENTON",
      "State": "NJ",
      "ZIP": "08608",
      "Street_ID": "{02CB095C-1708-11E3-B5F2-0062151309FF}",
      "X": 418639.49750699999,
      "Y": 505194.53772999998,
      "User_fld": "885421",
      "Addr_type": "StreetAddress",
      "Side": "",
      "Disp_Lon": 0,
      "Disp_Lat": 0,
      "FromAddr": ""
    }
  }
]
```

```
"ToAddr": "" } } }
```

## Geocode Addresses (Batch Geocode)

\*Supports batch geocode requests with up to 1000 records



- **(addresses)** Input address records to be geocoded
  - > For each record use either Street, City, State, ZIP or SingleLine for address attributes
  - > Optional: use the OBJECTID attribute and pass a unique ID for each input address (Must be an integer)
- **(outSR)** All addresses are returned by default in NJ State Plane coordinates. If requiring Latitude/Longitude coordinates, use the code 4269 in the Output Spatial Reference
- **(f)** For JSON output, use 'pjson' in the format parameter

## Example SingleLine Input w/ JSON

[https://geo.nj.gov/arcgis/rest/services/Tasks/Addr\\_NJ\\_cascade/GeocodeServer/geocodeAddresses?addresses={\"records\":\[{\"attributes\":{\"OBJECTID\":1,\"SingleLine\":\"72 S Clinton Ave, Trenton, NJ 08609\"},{\"attributes\":{\"OBJECTID\":2,\"SingleLine\":\"160 Nassau St, Princeton, NJ 08542\"}}\]}&outSR=4269&f=pjson](https://geo.nj.gov/arcgis/rest/services/Tasks/Addr_NJ_cascade/GeocodeServer/geocodeAddresses?addresses={\)

## Example JSON request body:

```
{
  "addresses": { "records": [
    { "attributes": { "OBJECTID": 1,
      "SingleLine": "72 S Clinton Ave, Trenton, NJ 08609" } },
    { "attributes": { "OBJECTID": 2,
      "SingleLine": "160 Nassau St, Princeton, NJ 08542" } } ]
  }
  "outSR": "4269",
}
```

```
"f": "pjson"  
}
```

## Geocode Addresses (Batch Geocode)

### Response Information

\*All input addresses are returned, regardless of whether they have matched

-**location (X/Y)** – gives the coordinates in the requested output coordinate system

-**score** – score of the candidate (0-100). 85 is required as a minimum match score

-**attributes-Match\_addr** – the address that the input address was matched to

-**attributes-Loc\_name** – the address locator that the address was matched to

-> 'Addr\_NJ\_pt\_mc' (Matched to an address point)

-> 'Addr\_NJ\_pt\_sub' (Matched to a subaddress point)

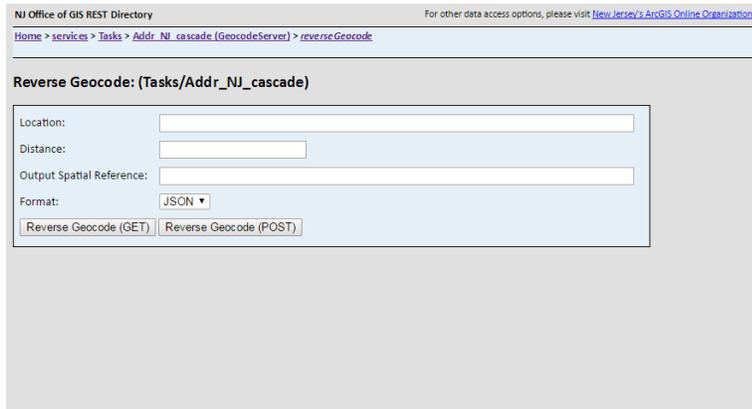
-> 'Addr\_NJ\_road' (Geocoded to a road centerline range)

-**attributes-Addr\_type**– type of address that was matched ( either StreetInt or StreetAddress)

### Example JSON response body:

```
{  
  "spatialReference": {  
    "wkid": 4269,  
    "latestWkid": 4269  
  },  
  "locations": [  
    {  
      "address": "72 S Clinton Ave, TRENTON, NJ, 08609",  
      "location": {  
        "x": -74.754868818016135,  
        "y": 40.218486083150658,  
        "m": 0  
      },  
      "score": 100,  
      "attributes": {  
        "ResultID": -1,  
        "Loc_name": "Addr_NJ_road",  
        "Status": "T",  
        "Score": 100,  
        "Match_addr": "72 S Clinton Ave, TRENTON, NJ, 08609",  
        "Side": "R",  
        "X": 420955.35989399999,  
        "Y": 504602.39163999999,  
        "User_fld": "0",  
        "Addr_type": "StreetAddress"  
      }  
    }  
  ]  
}
```

## Reverse Geocode



The screenshot shows a web interface for the Reverse Geocode service. At the top, it says "NJ Office of GIS REST Directory" and "For other data access options, please visit [New Jersey's ArcGIS Online Organization](#)". Below that is a breadcrumb trail: "Home > services > Tasks > Addr\_NJ\_cascade (GeocodeServer) > reverseGeocode". The main heading is "Reverse Geocode: (Tasks/Addr\_NJ\_cascade)". The form contains four input fields: "Location:", "Distance:", "Output Spatial Reference:", and "Format:". The "Format:" field is a dropdown menu currently set to "JSON". At the bottom of the form are two buttons: "Reverse Geocode (GET)" and "Reverse Geocode (POST)".

- **(location)** Input location with coordinates and associated coordinate system
- **(distance)** Radius threshold around input coordinates in which to look for addresses. Units are in Feet
- **(outSR)** All addresses are returned by default in NJ State Plane coordinates. If requiring Latitude/Longitude coordinates, use the code 4269 in the Output Spatial Reference
- **(f)** For JSON output, use 'pjson' in the format parameter

### Example JSON request body:

```
{
  "location": { "x": -74.65722696392,
                "y": 40.350405203324,
                "spatialReference": { "wkid": 4269 } }
  "distance": "100",
  "outSR": "4269",
  "f": "pjson"
}
```