

**CITY OF OCEANSIDE  
MONUMENT PERPETUATION**

Presented By: William D. Tuck, P.L.S.

OCEANSIDE PIER

AT AN ELECTION HELD - JUNE 19, 1926,  
TO VOTE 100,000 BONDS FOR THE  
CONSTRUCTION OF THIS PIER,  
THE PEOPLE OF OCEANSIDE VOTED  
885 FOR, AND 95 AGAINST.

CONTRACT AWARDED - DECEMBER 8, 1926

ON JULY 4, 1927.

C. D. MERRILL,  
H. D. BRODIE

R. L. LOUCKS - CITY ENGINEER.  
CONTRACTOR - SIDNEY SMITH.  
GEO. HOCKENSMITH - SUPT.

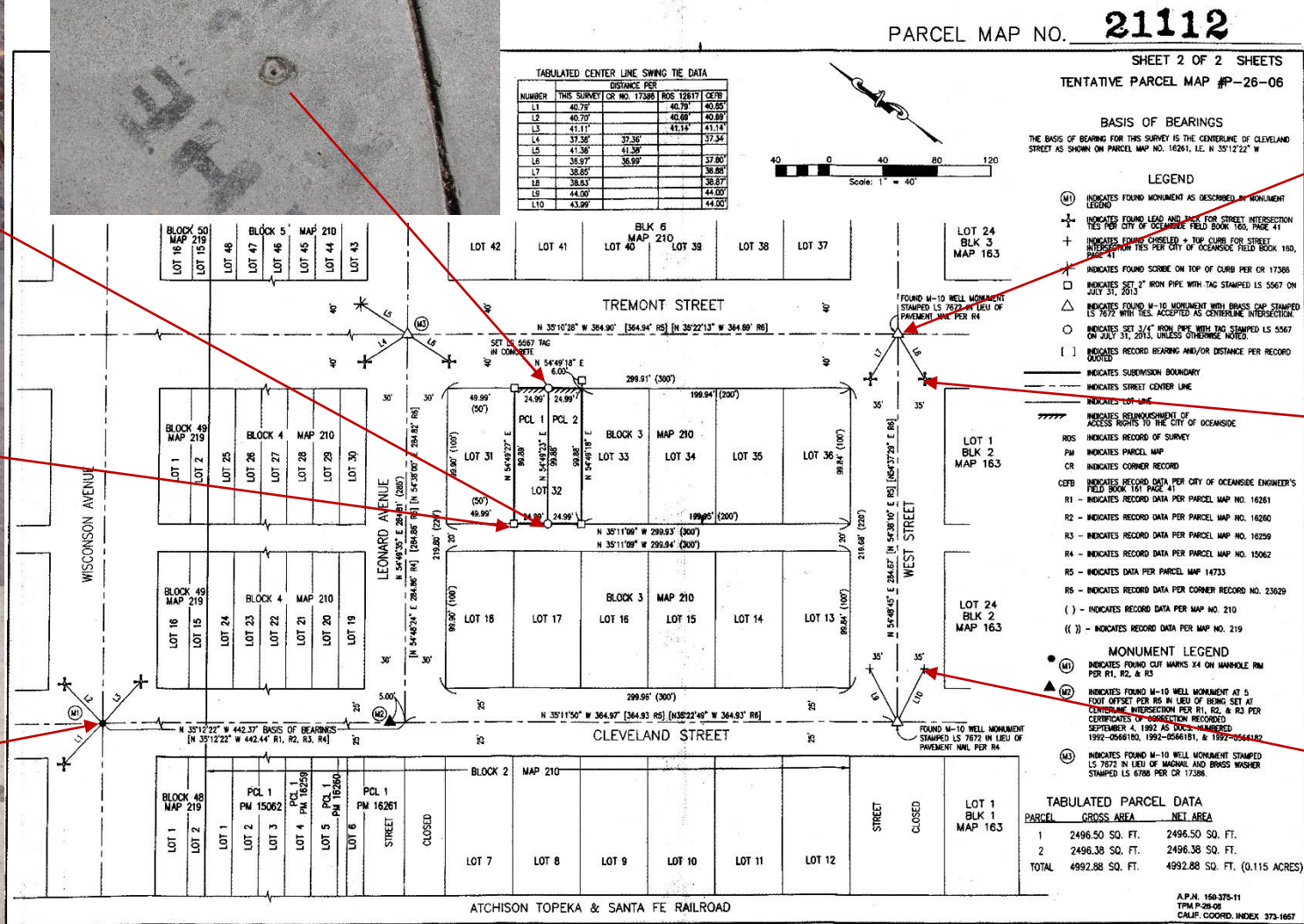
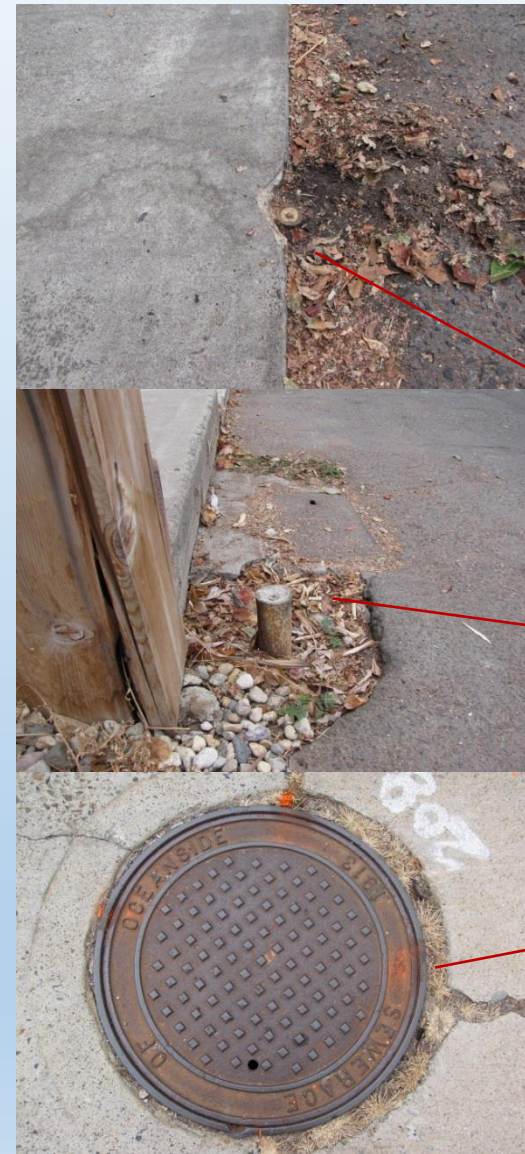
# What is a Monument?

- Any natural or artificial object that is fixed permanently in land and referred to in a legal description of the land. [Black's Law Dictionary]
- Monument, boundary – An object on or near a boundary line to preserve and identify the location of the boundary line on the ground. Where it is impracticable to establish a monument on or very close to a boundary line, the position of the boundary line is preserved by reference marks. The term “monument” is sometimes used to include both the mark on the boundary line and the reference mark. [ACSM]

# Examples of Monuments



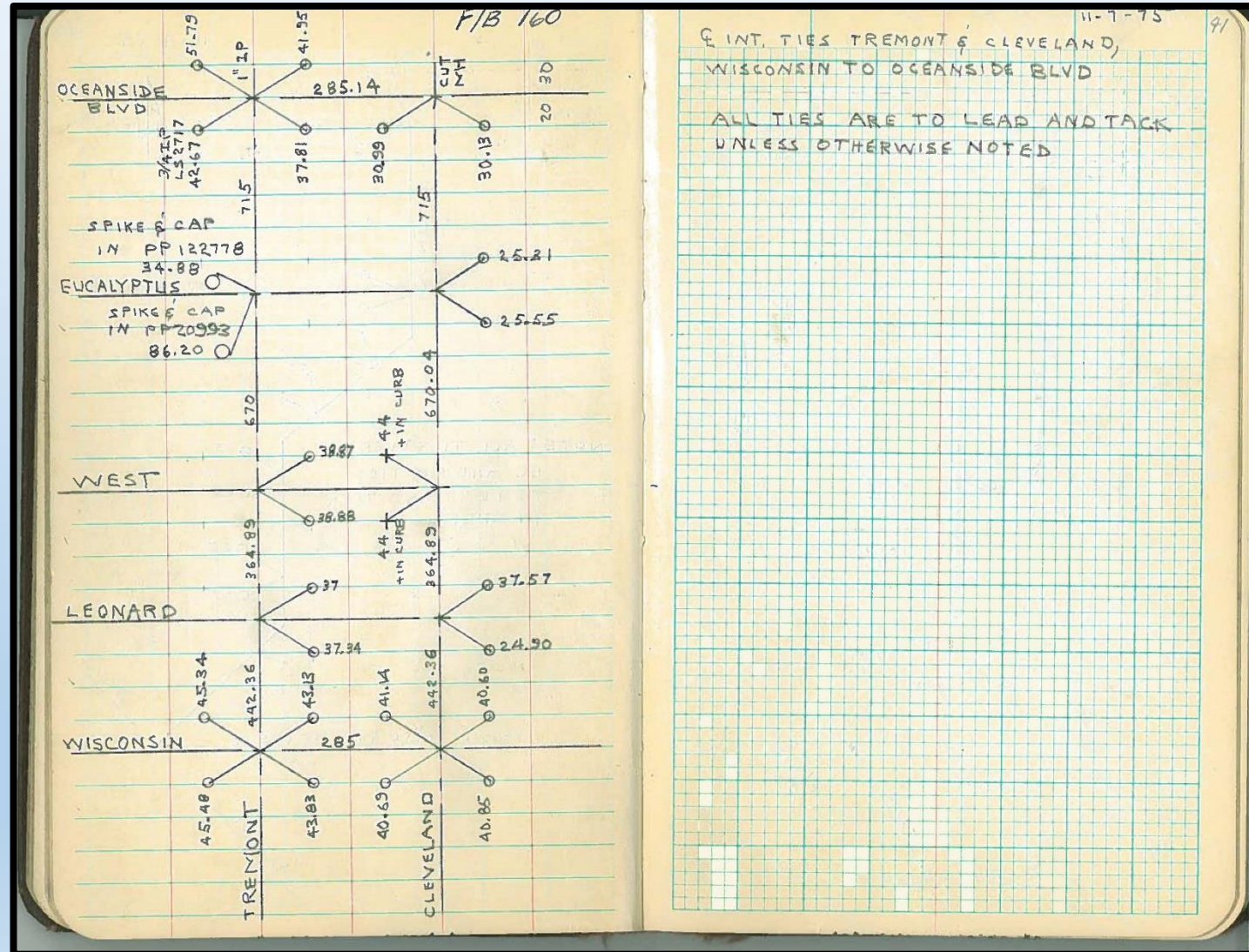
# Typical Locations of Monuments



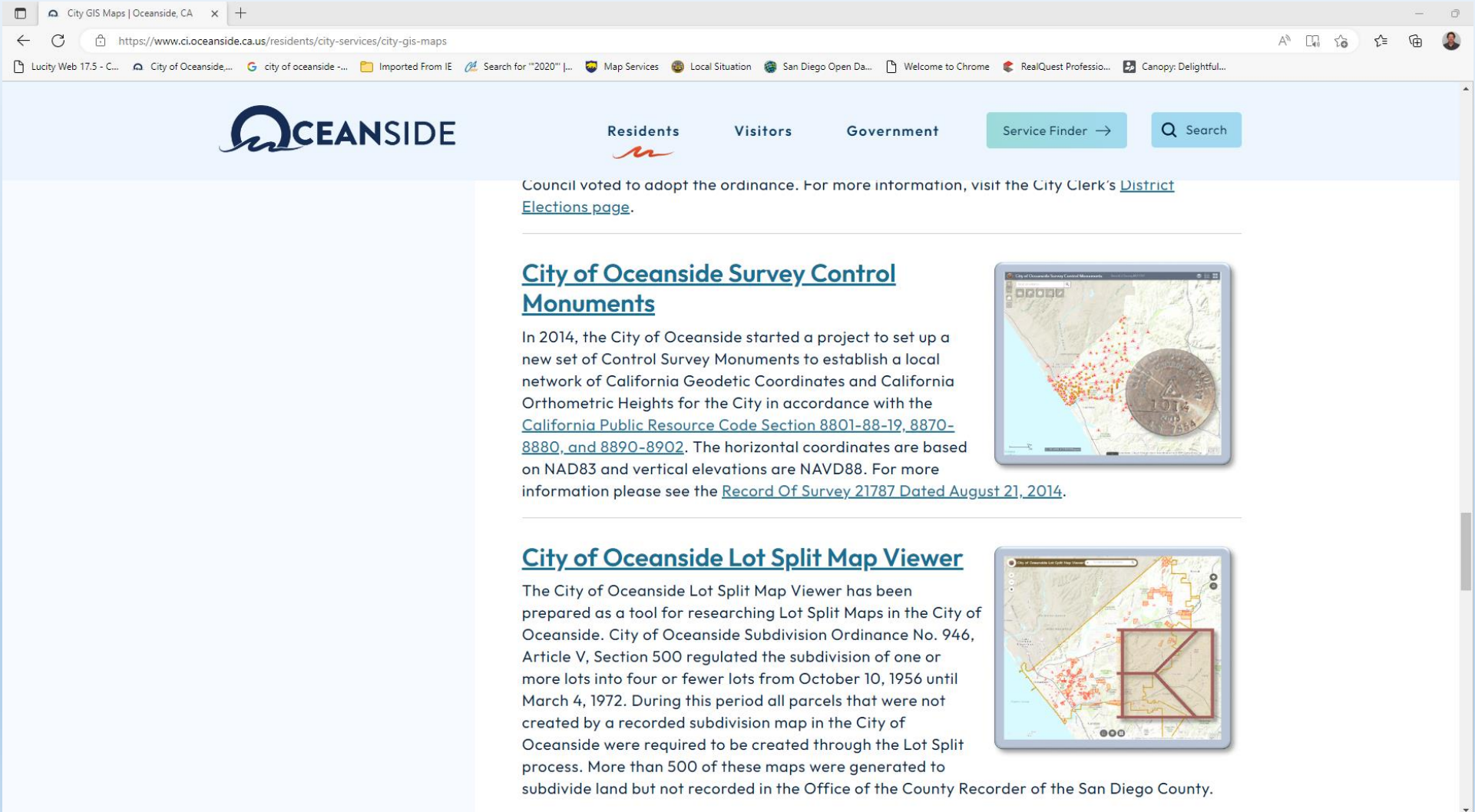
# Accessory Monument

- Monument, reference [USPLS] – An accessory monument which does not occupy the same geographic position as the corner itself, and whose spatial relationship to the corner is recorded and serves to witness the corner. Used where the site of the corner is such that a permanent monument cannot be established or where the monument would be liable to destruction, and bearing trees or a nearby bearing object are not available. [ACSM]
- Examples of accessory monuments include straddlers, swing ties, lead and tacks, and chiseled crosses.

# Field Book Centerline Ties



# City Survey Control Network



The screenshot shows a web browser window with the URL <https://www.ci.oceanside.ca.us/residents/city-services/city-gis-maps>. The page features the City of Oceanside logo and navigation links for Residents, Visitors, and Government. A search bar is also present. The main content area includes a notice about a council vote, a section titled "City of Oceanside Survey Control Monuments" with a map showing monument locations, and a section titled "City of Oceanside Lot Split Map Viewer" with a map showing lot split maps.

City GIS Maps | Oceanside, CA

<https://www.ci.oceanside.ca.us/residents/city-services/city-gis-maps>

Lucy Web 17.5 - C... City of Oceanside,... city of oceanside ... Imported From IE Search for "2020" [... Map Services Local Situation San Diego Open Da... Welcome to Chrome RealQuest Professio... Canopy: Delightful...

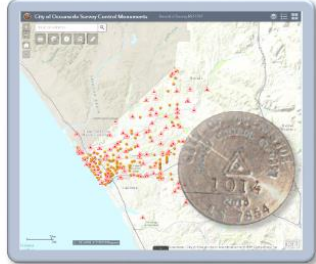
**OCEANSIDE**

Residents Visitors Government Service Finder → Search

Council voted to adopt the ordinance. For more information, visit the City Clerk's [District Elections page](#).

### City of Oceanside Survey Control Monuments

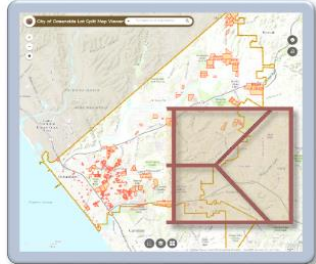
In 2014, the City of Oceanside started a project to set up a new set of Control Survey Monuments to establish a local network of California Geodetic Coordinates and California Orthometric Heights for the City in accordance with the [California Public Resource Code Section 8801-88-19, 8870-8880, and 8890-8902](#). The horizontal coordinates are based on NAD83 and vertical elevations are NAVD88. For more information please see the [Record Of Survey 21787 Dated August 21, 2014](#).



The map displays the coastline of Oceanside, California, with numerous red dots representing the locations of Survey Control Monuments. A large coin is overlaid on the map for scale.

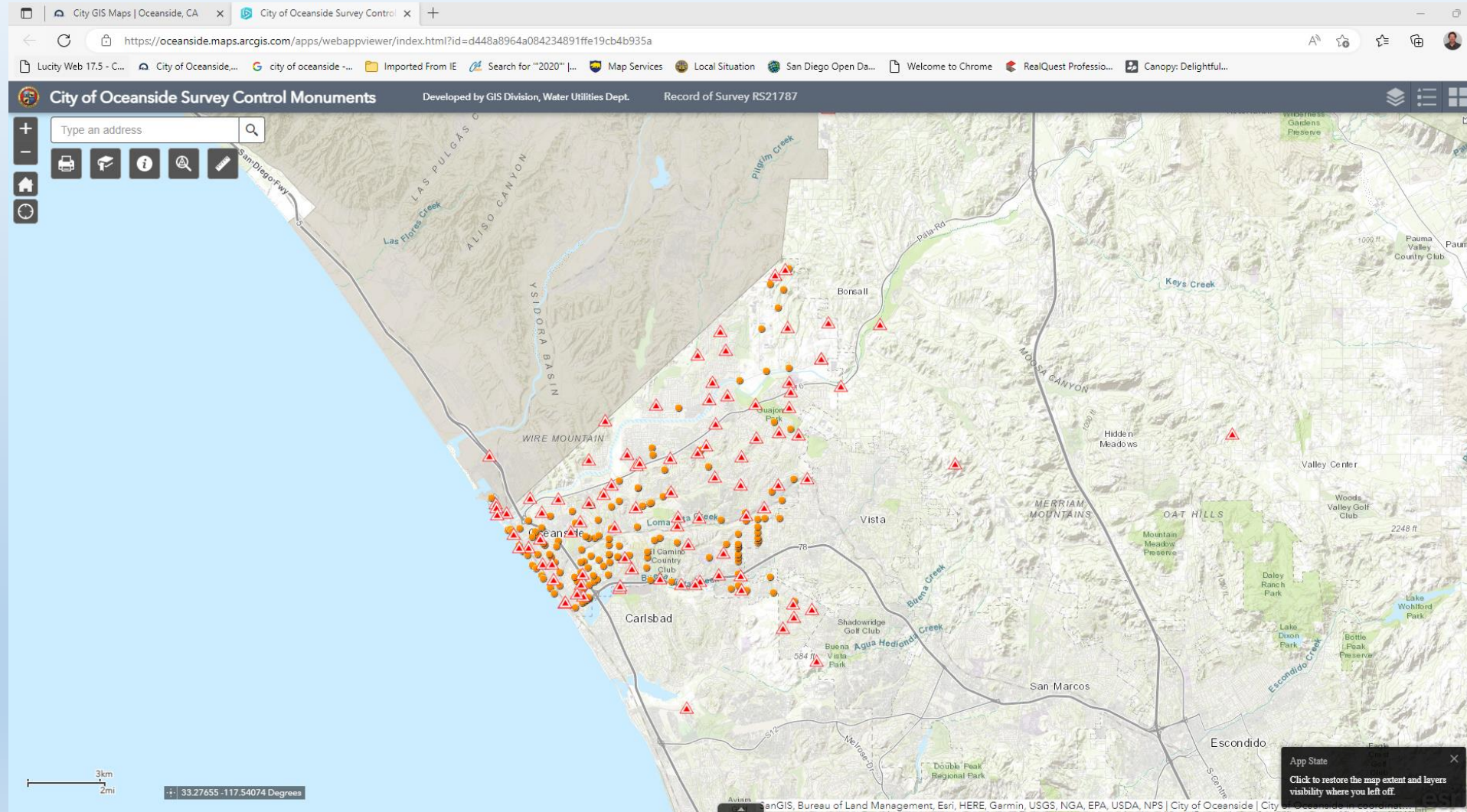
### City of Oceanside Lot Split Map Viewer

The City of Oceanside Lot Split Map Viewer has been prepared as a tool for researching Lot Split Maps in the City of Oceanside. City of Oceanside Subdivision Ordinance No. 946, Article V, Section 500 regulated the subdivision of one or more lots into four or fewer lots from October 10, 1956 until March 4, 1972. During this period all parcels that were not created by a recorded subdivision map in the City of Oceanside were required to be created through the Lot Split process. More than 500 of these maps were generated to subdivide land but not recorded in the Office of the County Recorder of the San Diego County.



The map shows a detailed view of a portion of Oceanside, with a red box highlighting a specific area where lot split maps were generated. The map includes street names and parcel boundaries.

# Interactive GIS Map



# SURVEY MONUMENT DATA AND RECOVERY SHEETS

## NGVD 29 BENCHMARK DATA AND RECOVERY SHEET

City of Oceanside Legacy Benchmark's



Legacy benchmarks are provided as a historical reference only and should not be used for new survey projects. All new projects need to be tied to the 2014 Citywide Survey Control Network. Use of legacy benchmarks requires approval from City of Oceanside Engineering Department. The latitude and longitude listed below is only accurate to within 2ft and is only provided as a tool for converting from NGVD 29 to NAVD 88. The latitude and longitude data provided is not acceptable for horizontal survey control.

**Number:** F-5

**Location:**

SET BRASS CAP STAMPED "COS BM F-5" ON TOP CURB N.P.C. NORTHWESTERLY CURB RETURN AT WISCONSIN AND PAICIFC STREETS.



**NGVD 29 Elevation:**

1984 ADJUSTED ELEVATION = 28.835'  
 2012 CITY OF OCEANSIDE - BM FOUND.  
 2012 X: 6216936.641 Y: 2013311.079  
 2012 LAT: 33.186399N LONG: 117.376793W

## CONTROL SURVEY MONUMENT DATA AND RECOVERY SHEET

City of Oceanside Geodetic Control Network



Number: **1001** **FOUND**  
 Name: **HARBOR DR. NORTH**



<b>Monument Description:</b> 4" Brass Disk in Curb	GPS Useable: Yes	Additional Stamping: Corps of Engineers-US Army Survey Mark 1988; Ref: USACOE Datasheet ACHO23
<b>Stamping:</b> OS 88-2LADO	<b>Center Mark:</b> Cross	<b>Depth:</b> 0
<b>Recovery By:</b> RBF	<b>Date:</b> May 2013	<b>Lid:</b>



**Location:**  
 On top of the westerly curb of Harbor Drive North across from 1562 Harbor Drive North

California Geodetic Coordinates of 1983			CCS 83, Zone 6 Coordinates		NAD83(NSRS2007)		
Deg.	Min.	Seconds	Meters	U.S. Survey Feet	Epoch:	2011.00	
Latitude:	33	12	37.11972	Northing: 616,328.401	2,022,070.76	FGDC Acc.:	1 cm
Longitude:	117	23	40.85667	Easting: 1,893,287.055	6,211,559.28	Survey by:	RBF
Ellipsoid Height (m):			-31.661	Combined Factor:	0.99996143	Adj. Date:	Oct 2013

California Orthometric Height (COH88)							
Datum	Meters	U.S. Survey Feet	Survey By	FGDC Acc.	Adj. Date	COH88	Geoid12A
NAVD88	3.067	10.06	RBF	2 cm	Oct 2013	Published	-34.740

# Bench Mark

- A reference point, usually permanent in nature, which may be natural or artificial, and whose elevation is known with respect to a reference datum (level surface) from which other elevations can be established.  
[ACSM]
- Examples of bench marks are 1 ½” or larger brass disk, spike and washer, copper rod, and chiseled square on top of curb.
- Bench marks can be in unusual locations and can sometimes take a trained eye to locate!

# Unusual Bench Mark Locations



# Bench Marks Can Be Hard To See!



# Importance of Monuments

- Monuments are used to maintain the integrity and continuity of adjoining properties, neighborhoods, subdivisions, roads, highways, cities, counties, states and countries.
- It has been observed across the country that public and private construction projects have destroyed monuments. The potential for conflicts and uncertainty of boundaries escalates with the destruction of monuments.

# The Law

- CBPC 8771.

(b) When monuments exist that control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control, the monuments shall be located and referenced by or under the direction of a licensed land surveyor or licensed civil engineer legally authorized to practice land surveying, prior to the time when any streets, highways, other rights-of-way, or easements are improved, constructed, reconstructed, maintained, resurfaced, or relocated, and a corner record or record of survey of the references shall be filed with the county surveyor.

# The Law Continued

- CBPC 8771.

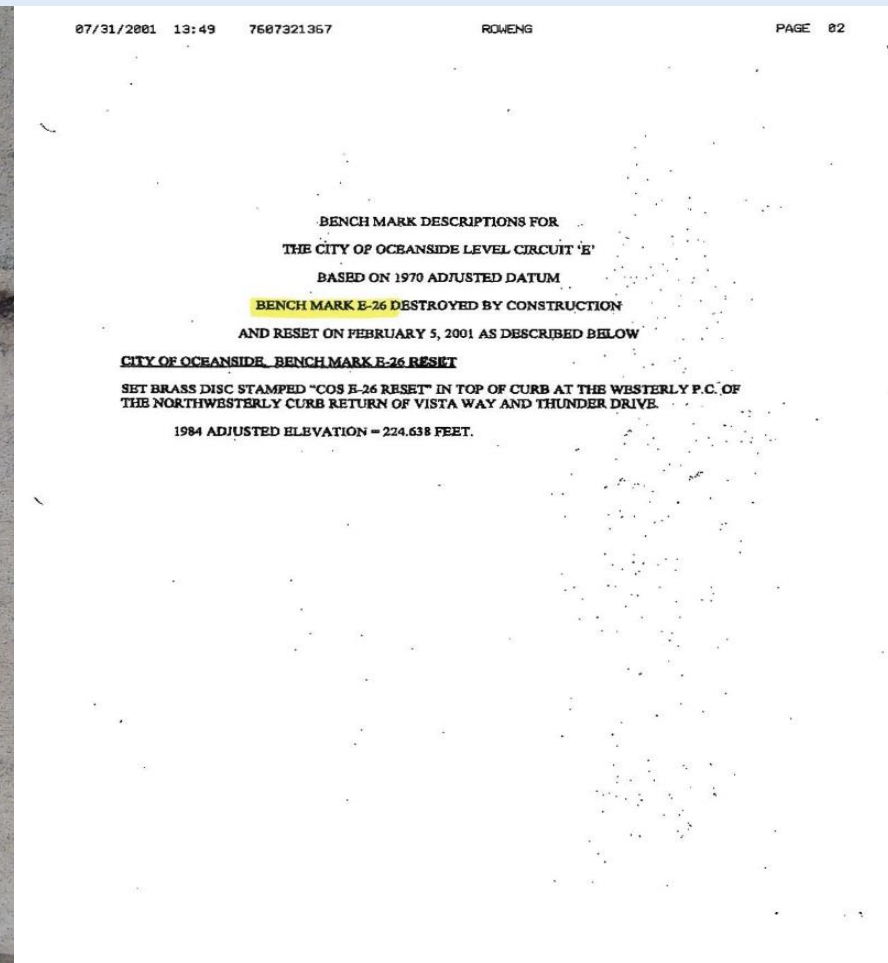
(c) A permanent monument shall be reset in the surface of the new construction or a witness monument or monuments set to perpetuate the location if any monument could be destroyed, damaged, covered, disturbed, or otherwise obliterated, and a corner record or record of survey shall be filed with the county surveyor prior to the recording of a certificate of completion for the project. Sufficient controlling monuments shall be retained or replaced in their original positions to enable property, right-of-way and easement lines, property corners, and subdivision and tract boundaries to be reestablished without devious surveys necessarily originating on monuments differing from those that currently control the area.

(d) The governmental agency performing or permitting construction or maintenance work is responsible for ensuring that either the governmental agency or landowner performing the construction or maintenance work provides for monument perpetuation required by this section.

# Most Common Problems

- Limits of construction change without notifying the Land Surveyor
- Contacting a Land Surveyor after demolition
- Contractor re-setting monuments

# Properly Reset Benchmark



# Contractor Illegally Resetting Monuments



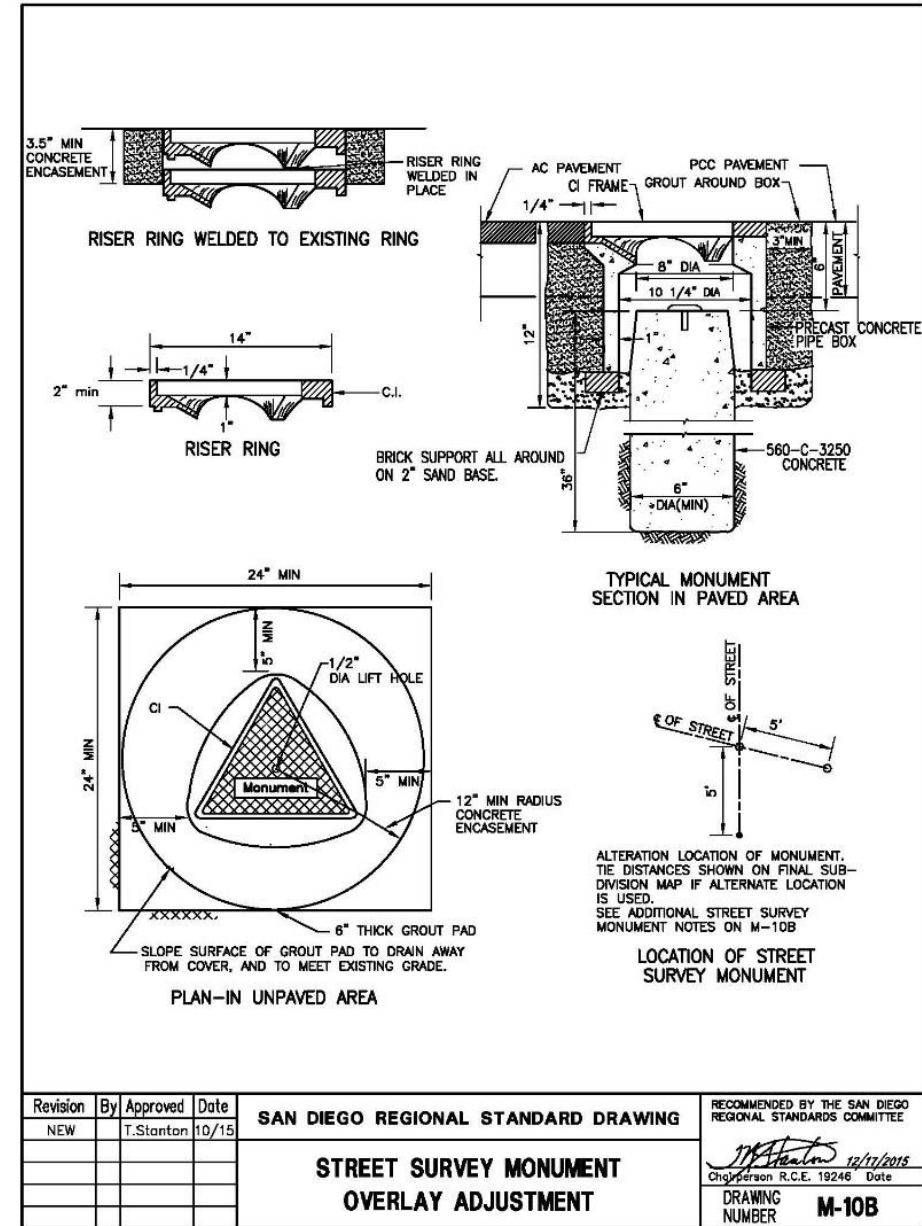
- Bench Mark set in new concrete
- No record of monument being reset
- Reset Bench Mark not stamped “RESET”
- CBPC 8725. Any person practicing, or offering to practice, land surveying in this state shall submit evidence that he or she is qualified to practice and shall be licensed under this chapter. It is unlawful for any person to practice, offer to practice, or represent himself or herself as a land surveyor in this state, or to set, reset, replace or remove any survey monument on land in which he or she has no legal interest, unless he or she has been licensed or specifically exempted from licensing under this chapter.

# Easy to Enforce

- **GREENBOOK 400-2**
- **PERMANENT SURVEY MARKERS.** Pursuant to Division 3, Chapter 15 of the Business and Professions Code, the Contactor shall not disturb survey monuments that “control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control” until they have been tied out by a Registered Land Surveyor or Registered Civil Engineer authorized to practice land surveying in the State of California.
- The Contractor shall submit to the Engineer a minimum of 7 days prior to start of Work a list of all controlling survey monuments which may be disturbed. The Agency will:
  - a) set survey points outside the work area that reference the location of each controlling survey monument that may be disturbed,
  - b) file a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments, and
  - c) file a Corner Record or Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

# Well Monuments

- Cover must be protected when performing slurry seals
- M-10 must be adjusted within 48 hours after pavement has been placed per City of Oceanside Design Manual
- Use SDRSD M-10B for street survey monument overlay adjustment



# Consequences



BOARD OF REGISTRATION FOR  
PROFESSIONAL ENGINEERS AND LAND SURVEYORS  
1008 FOURTH ST., SIXTH FLOOR, SACRAMENTO, CA 95814-3595  
TELEPHONE: (916) 645-5544



December 2, 1985

To all County Surveyors and City Engineers

The Land Surveyors' Act requires that monuments shall be protected and perpetuated. The act also specifically requires that when monuments are disturbed by the reconstruction or relocation of streets or highways, or any other public works, it is the responsibility of the governmental agency having local jurisdiction to have such monuments located and referenced by, or under the direction of, a person authorized to practice land surveying. They (the monuments) shall be re-set in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set to perpetuate their location. Sufficient controlling monuments shall be retained or replaced in their original positions to enable land lines, property corners, and tract boundaries to be re-established without requiring devious surveys necessarily originating on monuments differing from the ones which currently control the area.

Re-surfacing of streets and highways resulting in monuments being covered with paving material instead of being preserved will be considered a violation of the Land Surveyors' Act by the Board.

Land is one of California's most precious assets, the ownership of land, and consequently the ability to define boundaries is dependent on monuments and their perpetuation.

It is the responsibility of all of us to work together to protect the monuments which define lands in California.

Sincerely,

## City of San Diego Challenges State Board of Registration

SAN DIEGO - On December 2, 1985, the State Board of Registration for Professional Engineers and Land Surveyors distributed a letter "To All County Surveyors and City Engineers", regarding compliance with the requirements of the Land Surveyors' Act. The letter addressed the responsibilities of the governmental agencies having local jurisdiction over monuments located in streets or highways and the obligation of the agency to protect the monuments wherever any construction occurs.

The notice also stated that "Re-surfacing of streets and highways resulting in monuments being covered with paving material instead of being preserved will be considered a violation of the Land Surveyors' Act by the Board." The letter was sent to all agencies in the State of California.

In March of 1987, San Diego City street crews, under the direction of the City Engineer's office of San Diego went about the ambitious task of resurfacing a good many of the streets located in La Jolla, one of Southern California's most affluent neighborhoods. This area of San Diego is very old and is home to some of the most

resorce to the City's rigid subdivision monumentation policy. The individuals subdividing their lands were required by the City to set reference markers to the projects as a condition of their subdivision. To do otherwise would mean the City would not allow the map to record.

As the basis for the complaints, the City was provided with a copy of the original Board letter originally sent to them on December 2, 1985. Additional complaints were also filed with the local city council representative.

In response Ray L. Hall, the Deputy Director of the City of San Diego Engineering and Development Department, responded by stating that "It is our opinion that the City conforms to the law as stated for reconstructed or relocated streets and that the letter of December 2, 1985 signed by the Executive Officer of the Board of Registration for Professional Engineers and Land Surveyors does not conform with Section 8771 of the Land Surveyors Act." Furthermore, Mr. Hall stated that, "We would be pleased to meet with you, your attorney, ourselves and our attorney, to discuss this matter if you choose to pursue it further."

type of response the Board takes in this matter. Earlier, in 1986, the City of Coronado, also located in San Diego County, was the subject of numerous complaints regarding their ambitious handicap ramp construction project. The problems arose when ramps built earlier had destroyed monuments set at block corners to reference legally recorded city subdivision maps, records of survey maps, and corner records surveys. The Board took a hard stand on the issue and in conjunction with the State Attorney General's office threatened to file an injunction restricting any construction in the city until they were in compliance with the Land Surveyors Act. The City Engineer responded by personally assuring the Board of Registration that the City would make sure that the markers in question would be reset, in addition to making sure that future construction specifications would assure that survey markers would be protected by future construction. □

**State Law requires monuments to be protected**

## A Reckless Path of **DESTRUCTION**



Published in a National Magazine

# Procedure for Perpetuation

- RE/Contractor – Submits a request with a Professional Land Surveyor (PLS) to perpetuate monuments
- PLS – Researches and investigates every site that will be disturbed and contacts City Engineering Department for centerline ties and bench mark information
- PLS – References all monuments that may be disturbed and files a pre-construction corner record with County Surveyor
- RE/Contractor – Notifies PLS when construction is completed
- PLS – Resets all monuments that were disturbed and files a corner record with County Surveyor

# Benefits of Being Proactive vs Reactive

- Protection of the rights of property owners
- Cost savings – It cost less to preserve monuments than to re-establish
- Rough estimate to preserve one monument is \$500 (No fee to file corner record with County Surveyor). Cost to re-establish one monument after being destroyed can be as much as \$5000...Billable to the Contractor
- Tax savings – Re-establishing after being destroyed adds significant costs, ultimately paid for by the tax-paying public if City is found to be responsible
- Stay out of court – Avoid civil actions based on uncertain boundary locations

# Final Thoughts

- **IT'S THE LAW!!!**
- In accordance with State Law, only a person authorized by the Board of Professional Engineers, Land Surveyors, and Geologists to practice Land Surveying is allowed to reference and reset monuments
- It takes a trained eye to find monuments
- Contractor is responsible for lost monuments
- “Cursed be he who removeth his neighbor’s landmark” (Deuteronomy 27:17)

# Questions or Comments

## Contact:

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