# Design Standard Decision Document for

# Utility Pole Work

The Design Standard Decision document (DSDD) is an engineering



**XX/XX/XX**

**C12345**

**Name**

analysis of the nonstandard feature(s) and a recommendation

pursuant to Caltrans design guidance. The DSDD is not an

evaluation of the design and integrity of the utility infrastructure:

Name, Registered Civil Engineer

Name of Organization

Submitted by:

Name, *(Utility Representative) Date Telephone*

Name of Utility Organization

*(Select all that are applicable - Consult the District Design Liaison on the appropriate boxes to check)*

*Includes exceptions to District-delegated Design Standards*

Concurred by:

Approved by:

Name, Office Chief *or Date Telephone*

Name, Deputy District Director for Design

*(Select only one - Consult the District Design Liaison on the appropriate boxes to check)*

*Includes exceptions to Non-delegated Design Standards*

Not Applicable:

Approved by:

Name, Project Delivery Coordinator *Date Telephone*

Headquarters Division of Design

*Instructions for Signature Sheet*

*(Delete from final document)*

*General:*

*The purpose of this template is to facilitate a quality DSDD that provides necessary engineering data and justifications for proposed nonstandard features. Minor modification of this template to reflect project-specific consideration is acceptable when accomplished with the concurrence of the approval authority, and the modification does not deviate from the purpose of this template. All instructions are italicized, red and highlighted and should be removed before finalizing or submitting DSDD for approval.*

*Prepared by:*

*The design decision document must be prepared by a registered civil engineer in responsible charge of the work (as defined by California Business and Professions Code, Section 6703), or other licensed professional practicing within the scope of their license. Include the name of the utility organization or the company name of the consultant engineer.* *Print name and sign.*

*Submitted by:*

*For utility company applicants, this would be a utility representative. Print name and sign.*

*Concurrence by and approved by:*

*For design standards where the approval authority is the Headquarters Project Delivery Coordinator (print name and sign):*

* *Concurrence is given by the district office chief, design manager, or Deputy District Director for Design. Typically, the concurrence is from a Supervising Transportation Engineer, Caltrans or could be from a Principal Transportation Engineer, Caltrans.*
* *Approval is given by the Headquarters Project Delivery Coordinator, a Supervising Transportation Engineer, Caltrans.*

*For design standards where the approval authority has been delegated to the Caltrans District Director (print name and sign):*

* *Approval is given by the Caltrans District Director’s approval authority; typically, from an office chief, design manager, or Deputy District Director for Design that has been delegated the approval authority.*

*Reference Caltrans Guidance Documents*

*Highway Design Manual*

[*https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm*](https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm)

*Design Information Bulletin (DIB) 82 “Pedestrian Accessibility Guidelines for Highway Projects”*

[*https://dot.ca.gov/programs/design/design-information-bulletins-dibs*](https://dot.ca.gov/programs/design/design-information-bulletins-dibs)

**1. ENCROACHMENT PERMIT PROJECT PROPOSAL**

All terms and conditions contained throughout the encroachment permit process remain binding without explicit language attesting otherwise.

*This template is for documenting nonstandard features related to adding new pole(s), replacing poles, relocating pole(s), adding new guy-anchor(s),* *or adding new equipment at base of pole measured from ground up to a height of 14 feet along the pole.*  *When documenting exceptions from ADA standards use the “Exceptions to Disability Design Standards” in DIB 82.*

1. **PROJECT DESCRIPTION:**

*Provide a brief project description summary. Include information such as the route, postmile limits, name of utility owner, project name/identifier, fire mitigation program name, total number of poles in the project, number of poles needing documentation in the DSDD, and other descriptions to provide the reader with an overview of the project and/or site.*

*Complete Table 1-1 to describe utility pole location(s) and work. Complete Tables 1-2A and 1-2B with a description of the nonstandard features at the utility pole location(s). The common nonstandard features are provided, additional nonstandard features not listed may apply. Consult with Caltrans District/Region design staff to identify other applicable nonstandard features. Add rows to table as needed.*

*A single fixed object or a range of fixed objects may be listed. Required exhibits/attachments must include identification markings where each Fixed Object ID(s) is located corresponding to this table. See Section 8, Attachments for more details.*

*Refer to* [*Traffic Safety Bulletin 21-02 “Release of Crash Data”*](https://safetyprograms.onramp.dot.ca.gov/downloads/safetyprograms/files/21-02_release-of-crash-data-on-shs.pdf)*, available upon request from the Office of Safety Programs, for analysis of nonstandard features such as corner sight distance, CRZ etc.*

**Table 1-1 – Utility Pole Work Location(s) and Type of Work**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fixed Object ID(s)** | **Location** | | | | **Type of Pole Work** | | | | |
|  | **Rte** | **Begin PM/**  **End PM or each PM** | **Direc-tion**  **(NB, SB, EB, WB)** | **Portion of Hwy Right of Way** | **Replace Pole** | **Add New Pole** | **Relo-cate Pole** | **Add/ ReplaceGuy- Anchor** | **Add Equip-ment at Base of Pole** |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

*Please note, all work on existing utility poles as stated in Section 1 is considered new construction and subject to discretionary fixed objects standards as defined in HDM Index 309.1(2)(b). Also, work on existing utility poles that are shielded behind existing guardrail, barrier or other safety device comply with HDM Index 309.1(2)(b) and do not require a design exception unless the work will impact or degrade the existing safety device.*

*Table 1-2A and Table 1-2B are a continuation of information for the same fixed object and as such, each fixed object ID should be listed in both tables.*

*Distances indicated in tables below are measured from face of pole to the edge of traveled way (ETW).*

**Table 1-2A –Geometric Conditions at Utility Pole Replacement Location(s)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fixed Object ID(s)** | **Discretionary Fixed Objects**  **Distance (ft) from nearest ETW2**  HDM Index 309.1(2)(b) | | | | | **Minimum Horizontal Clearance**  **(ft)**  HDM Index 309.1(3) | | |
|  | **Pole** | | **Guy-Anchor** | | **Stan-dard**  (ft) | **Existing**  **(Indicate with or w/o curb/(ft))** | **Proposed**  **(Indicate with or w/o curb/(ft))** | **Standard**  **(Indicate with or w/o curb/(ft))** |
|  | **Exist-ing** | **Pro-**  **posed** | **Exist-ing** | **Pro-posed** |
|  |  |  |  |  | 52.0 |  |  |  |
|  |  |  |  |  | 52.0 |  |  |  |

**Table 1-2B –Geometric Conditions at Utility Replacement Pole Location(s) Cont’d**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Fixed Object ID(s)** | **Vertical Clearance of electrical line over roadbed** | | | **Corner Sight Distance** | | **Traffic Safety Device** | |
|  | **Minimum Distance (ft) Over the Roadbed**  HDM Index 309.2 | | | **Replacement Pole Within Clear Sight Triangle(s)**  HDM Index 405.1(2) | | **Existing** | **Proposed** |
|  | **Existing** | **Proposed** | **Standard** | **Existing**  Y or N | **Proposed**  Y or N |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. Will the proposed project impact any existing pedestrian facilities, such as sidewalks, walkways, crosswalks, or curb ramps? ☐ Yes ☐ No

If yes, describe:

1. Does the proposed project involve the abandonment of an existing pole?

(If “Yes” complete Table 2 below if “No” delete Table 2)

☐ Yes ☐ No

Table 2– Abandoned Poles

|  |  |
| --- | --- |
| Fixed Object ID | Abandoned Pole New Owner (if applicable) |
|  |  |
|  |  |

1. Are telecommunication lines or other tenants attached to the existing poles to be relocated or replaced? ☐ Yes ☐ No

If so, has the telecommunications company or other tenants been notified?

☐ Yes ☐ No

How many approximate days are they required to move their lines to the new pole?

1. **EXISTING HIGHWAY CONDITIONS IN THE VICINITY OF POLE WORK**

Posted Speed:       Shoulder Widths:

Number of Lanes:      Sidewalk Widths:

Highway Classification:      Existing Curb?☐ Yes ☐No

☐Urban or ☐Rural Describe Side Slope:

Roadway Alignment: ☐ Tangent and ☐ Curve

*(Provide this information for each segment with varying speed, number of lanes, etc. within each run of sequential poles. A table of this section may be provided.)*

**2. REASONS FOR NONSTANDARD PLACEMENT OF POLE(S)**

*This Section will need to be repeated for each separate nonstandard design feature listed in Table 1-2A and 1-2B. Therefore, the justification for each nonstandard feature should be specific to the corresponding Fixed Object IDs.)*

1. **Design Feature 1**

|  |  |
| --- | --- |
|  | **Nonstandard Design Feature**  **Discretionary Fixed Object** |
| **Fixed Object ID(s)** | ***(Fill in all Fixed Object ID(s) that apply to DESIGN FEATURE 1)*** |

**Reason for Nonstandard Feature 1:**

*(Provide complete, compelling, and objective justification with backup information, as needed, to explain why the nonstandard pole placement is acceptable.*

*Supportive factors that justify the nonstandard pole placement have included a combination of excessive costs, significant right-of-way acquisition, and environmental and/or social economic impacts.*

*Also include if maintaining consistency with highway segments, and construction of incremental improvements or mitigation measures apply.*

*If a utility pole has been hit once or more during the collision analysis and relocating or moving the pole incrementally is not an option, consult the District Traffic Safety Engineer for their recommendations. Installation of a shielding device (guardrail, barrier, etc.) would be at the sole cost of the utility owner, if shielding is recommended.*

*Address if the work will impact or further degrade existing safety systems (guardrail, barrier, etc.).*

*Indicate if new poles will be placed in the State right-of-way or clear recovery zone (CRZ) [see definition of CRZ in Index 309.1(2) of the Highway Design Manual (HDM)]. Also, include if additional guy-anchors will be placed/relocated in the CRZ, and if so, include the location of the added/relocated guy-anchors relative to the nearest travel lane edge of traveled way in the attachments.*

*Simply stating that the pole must be replaced due to General Order-95 is insufficient.*

*Please note, all existing utility poles that are replaced or relocated will no longer be considered existing above-ground utilities as defined in Index 309.1(2)(a) of the HDM. New construction standards for discretionary fixed objects will apply as defined in Index 309.1(2)(b) of the HDM.)*

1. IS UNDERGROUNDING OF THE SERVICE FEASIBLE? ☐ Yes ☐ No

If no, explain:

2. CAN THE POLES BE INSTALLED ON PROPERTY OUTSIDE AND ADJACENT TO THE STATE RIGHT-OF-WAY? ☐ Yes ☐ No

If no, can the installation be moved as close to the State right-of-way line as possible?

*(List the geometric constraints for not moving the installation outside or closer to the State right-of-way line.)*

**3. ESTIMATED COST TO BRING UP TO STANDARD**

*(Summarize the added cost, beyond the proposed total cost estimate needed to meet the design standard in terms of a percentage of the total cost. This estimate must be realistic but does not need to be highly developed. When the design standard decision document includes multiple nonstandard features, provide separate cost summaries for each nonstandard feature.)*

1. **Design Feature 2**

*(**See Instructions for Design Feature 1 above)*

*For example:*

|  |  |
| --- | --- |
|  | **Nonstandard Design Feature**  **Minimum Horizontal Clearance** |
| **Fixed Object ID(s)** | *(Fill in all Fixed Object ID(s) that apply to* ***DESIGN FEATURE 2****)* |

**Reason for Nonstandard Feature 2:**

**Estimated Additional Cost to Bring Up to Standard:**

1. **DESIGN FEATURE 3**

*(See Instructions for Design Feature 1 above)*

**3. TRAFFIC DATA**

**Table 3 – State Highway Traffic Volumes in Vicinity of Electric Pole Replacement, (***Year***)\***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| District | Route | Post  Mile | Description | Back  Peak  Hour | Back  Peak  Month | Back  AADT | Ahead  Peak  Hour | Ahead  Peak  Month | Ahead  AADT |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

*\*Fill in the year in the title of Table 3 in which the existing current year traffic volumes were obtained from the Traffic Census website:* [*https://dot.ca.gov/programs/traffic-operations/census*](https://dot.ca.gov/programs/traffic-operations/census)

***(****Include both the annual average daily traffic (AADT) and peak period volumes (both hourly and monthly) for the area near the pole installations. If the pole locations are between two count stations, provide Traffic Census data from the station before and the station after the begin and end limits of a string of sequential poles to be replaced. Add rows to the table for independent runs of sequential poles to be replaced.)*

**4. COLLISION ANALYSIS**

**Table 4 - TASAS Table B Collision Summary1**

*Enter begin and end date of most recent 3-year period collision data*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PM | Description | # of Collisions | | | Actual Accident Rate (coll/MVM) | | | Avg Accident Rate (coll/MVM) | | |
| F | I | Tot | F | F+I | Tot | F | F+I | Tot |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

*1Complete the summary table of TASAS Table B collision data for the latest 3-year period showing actual versus average collision rates. Enter the begin and end date of the most recent 3-year period under the title.*

***Caltrans District Traffic Safety will provide this data. District Permit Engineer or District Design Liaison will provide Traffic Safety contact information.***

*Analyze only the collision data within the vicinity of the proposed nonstandard pole installation. Include analysis of collision data that should identify prevalent collision types and causes when the applicable nonstandard design feature(s) can be correlated to existing collision data. Refer to* [*Traffic Safety Bulletin 21-02 “Release of Crash Data”*](https://safetyprograms.onramp.dot.ca.gov/downloads/safetyprograms/files/21-02_release-of-crash-data-on-shs.pdf)*, available upon request from the Office of Safety Programs, for analysis of nonstandard features such as corner sight distance, CRZ etc.*

*If related collisions patterns were identified, the review of collision patterns should focus on how the nonstandard pole installation will not contribute to any increase in collisions and/or will help alleviate issues.)*

*Use of the Highway Safety Manual’s (HSM) predictive methodologies to analyze nonstandard features as described in Chapter 2 of the guidance document titled, “Application of the HSM Methodology for Project Development” (2023), is limited when analyzing spot locations; however, it may be appropriate when utility pole replacement projects include multiple poles that are closely spaced resulting in a change of the predicted crashes when standard and nonstandard conditions are compared. In such instances, use of the HSM is required per the April 4, 2022 “Performance-Based Decision Making using the HSM” implementation memo and associated Attachment 1. If application of the HSM is warranted, an analysis summary is to be included in Section 2 under the specific nonstandard feature being analyzed. If application of the HSM is not warranted, include justification at the beginning of Section 2 or at the end of Section 4.*

**5. FUTURE UTILITY INVESTMENTS WITHIN HIGHWAY CORRIDOR**

*(Describe the limits of any planned utility pole installation/replacement projects within State right-of-way near or adjacent to this proposed project. List approximate timelines of future projects.)*

**6. REVIEWS AND CONCURRENCE**

**The design standards as described in this design standard decision document have been reviewed and the nonstandard features are concurred by the following*:***

*(This section is also reserved for District Design Liaison (DDL), District Permit Engineer, Landscape Architect, Maintenance, or others to initial and date upon completion of their review and concurrence if required by the district. Additional signature blocks can be added as needed. Consult with the DDL for specific District procedures.)*

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­ Initials\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7. ENVIRONMENTAL DETERMINATION/DOCUMENT**

*Consult with the District Environmental unit to determine the appropriate National Environmental Policy Act (NEPA) environmental determination/document for the project. Choose the appropriate statement below for the federal approval of the non-standard design feature:*

*The project location is not part of the Federal-aid Highway System/National Highway System (as defined by 23 USC 101(a)(6) and 23 USC 103(b)) and therefore FHWA approval of the non-standard design feature is not required and compliance with NEPA is not applicable.*

*OR*

*The project location is part of the Federal-aid Highway System/National Highway System (as defined by 23 USC 101(a)(6) and 23 USC 103(b)). The project is subject to NEPA and the approval of the non-standard design feature has been or will be addressed in the NEPA determination or document for the project.*

*OR*

*Include if approval of the non-standard design feature(s) is needed but there is no NEPA determination or document needed for the project:*

*Nonstandard design features are required for the project and the “blanket” categorical exclusion for approval of nonstandard design features contained in the memorandum signed by Jay Norvell on March 3, 2008, serves as the NEPA approval for the nonstandard design features when there is no other federal approval required for the project.*

**8. ATTACHMENTS**

1. **Project Vicinity Map**
2. **Nonstandard Design Feature - Layout (Plan View)**
3. **Nonstandard Design – Cross Section**

*(****All attachments should be black and white [no color copies or color photos] and in standard paper sizes of 8.5” x 11”, 8.5” x 14”, or 11” x 17” per Caltrans Division of Legal request.***

*When the design standard decision document covers multiple nonstandard features at various locations, a project strip map or layout(s) may be provided to show the location, limits, and nature of each nonstandard design feature. Clearly label the Fixed Object ID on the attachment. The information shown on the attachment should be consistent with the information from Table 1 – Utility Pole Work Location(s)*

*Provide* *limits of the nonstandard design feature(s) with stations or post miles [https://postmile.dot.ca.gov] and dimensions on a layout plan.*

*Provide cross sections and/or special details to clearly illustrate the proposed condition for each nonstandard utility pole location. The cross section must show the existing and new guy-anchors and any other existing and new equipment installation along with the distance to the edge of traveled way clearly shown. Pole installations should clearly convey the existing versus proposed distance from the face of pole to the nearest edge of traveled way, back of curb, etc. as required per nonstandard feature. Geometric and terrain constraints should also be shown for installations that cannot be moved closer to the State right-of-way line.*

*Do not attach superfluous materials such as complete project plan sets or engineering reports unless specifically requested by the appropriate approval authority.*

**EXAMPLE ATTACHMENTS**







