

TriMet Substation Upgrades

Prepared for:

Tri-County Metropolitan Transportation District of Oregon
101 SW Main Street #700
Portland, Oregon 97204

Prepared by:



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Project Summary

Request:	Application for TriMet power substation replacements.	
Location and Map Number:	Steel Bridge and NW Flanders Street (Under west side bridge on-ramp) Multnomah County Assessor's Map No. 1n1e34AA, Tax Lot 3900	
Applicant/Owner:	Tri-County Metropolitan Transportation District of Oregon Thomas Walther 101 SW Main Street, Suite #700 Portland, Oregon 97204 Phone: 503-602-0896 Email: WaltherT@TriMet.org	
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I. Project Description

Tri-County Metropolitan Transportation District of Oregon (TriMet), the applicant, is proposing to replace eleven existing tractor power substations (TPSS) along the original Banfield Light Rail segment, including four within public right-of-way within the Central City. The first of these four is our Steel Bridge TPSS near 123 NW Flanders Street or NW 1st Avenue and NW Naito Parkway. The existing brick structure containing the TPSS would be replaced with a larger, modern modular building and enclosed by non-metallic fencing to meet current functional and security standards and access requirements for maintenance. In addition to these structures, the utility provider requires additional underground and above ground utility improvements associated with upgrading the functionality of the TPSS.

The proposed improvement conforms to all applicable sections of Title 33, Planning and Zoning (Title 33). This application provides findings of fact that demonstrate conformance with all applicable standards of the previously mentioned governing regulations. Applicable design criteria of Title 33 will appear in *italics* followed by the applicant's responses in **bold** font.

II. Design Guidelines (Central City Fundamental Design Guidelines)

The following guidelines were identified as potentially applicable to the proposed project during the early assistance meeting held on February 25, 2025, to discuss construction of the proposed power substation. However, while responses were provided to all identified guidelines, the proposed TPSS replacement is an unoccupied basic utility. Therefore not all guidelines will be applicable.

A2. *Emphasize Portland Themes (Context)*

Response: The proposed structure is classified as a non-standard improvement within public right-of-way. As a basic utility, this building will not have windows or access points for the public. To alleviate the visual bulk that could be created by these features, the applicant is proposing the addition of an original mural created for the site by a local artist on the building facades; therefore, this standard is met.

A5. *Enhance, Embellish and Identify Areas (Context)*

Response: Wrapping the building facades in art or creating other aesthetic improvements would help identify the area's special features by integrating them into the project design. The applicant proposes to coordinate with the skate park development immediately adjacent to this site's improvement to satisfy this design guideline.

B2. *Protect the Pedestrian (Public Realm and Quality & Performance)*

Response: As a non-standard improvement within public right-of-way incorporating design elements that protect the pedestrian is difficult because there are not sidewalks or walkways abutting the proposed structure replacement and pedestrians should not be in close proximity to the high voltage systems within it. In an attempt to increase the safety of pedestrians in the surrounding area, exterior lighting will be mounted on the structure. Art will enhance of pedestrians using nearby pathways and the future skate park.

C1. *Enhance View Opportunities (Context)*

Response: The proposed TPSS replacement is located under and near a set of ramps connecting the Steel Bridge to adjacent roadways where views are obscured by ramps and columns. The proposed original mural on the building exterior would enhance local views from the adjacent skate park.

C2. *Promote Permanence and Quality in Development (Public Realm and Quality & Performance)*

Response: The proposed replacement structure will be constructed with a metal exterior to ensure the improvement will be durable and sustain its appearance for years to come. The appearance of the base materials will be covered by art on appropriate building walls. Art will be applied using durable and graffiti resistant materials.

C4. *Complement the Context of Existing Buildings (Context, Public Realm, and Quality & Performance)*

Response: As a non-standard improvement in the public right-of-way, the use and function of the proposed structure are quite different from nearby buildings. This improvement has different design needs as a result, and the patterns, styles, or materials incorporated in nearby developments are not as functional for the proposed use. Art will tie the building in with the streetscape and proposed skate park.

C5. *Design for Coherency (Public Realm and Quality & Performance)*

Response: As a relatively compact building with a simple design, the proposed public art would cover the exterior walls in a coherent manner. For example, art will be integrated with the building features such as access panels, person doors, and HVAC equipment (where possible).

C8. *Differentiate the Sidewalk-Level of Buildings (Public Realm and Quality & Performance)*

Response: The proposed structure is limited to a single story. Consequently, there will not be an opportunity to differentiate between the sidewalk level of the building and stories higher up. This guideline is not applicable.

C11. *Integrate Roofs and Use Rooftops (Public Realm and Quality & Performance)*

Response: The proposed TPSS replacement structure is a one-story basic utility that wants to be less prominent than a habitable structure. Without occupants, there are not appropriate opportunities to make use of the rooftop in an appreciable way. This guideline is not applicable.

III. Commercial/Mixed Use Zones (33.130)

33.130.100 Primary Uses

Response: The proposed structure replacement will improve the existing TriMet electrical substation located in public right-of-way. Per Section 33.920.400.C, electrical substations are considered an example of the “Basic Utilities” use category. Consequently, the proposed improvement is considered an allowed use as it does not exceed the thresholds outlined in 33.130.100.b.7.

33.130.110 Accessory Uses

Response: No accessory uses are included in this application. Therefore, this section is not applicable.

33.130.200 Lot Size

Response: The proposed improvement does not include the creation of new lots that would be subject to Chapter 33.613. Therefore, this section is not applicable.

33.130.205 *Floor Area Ratio*

Response: The proposed improvement is located within public right-of-way, so there is not a defined single unit of land that can be used to measure floor area ratio. Additionally, the applicant is not requesting to transfer floor area from an adjacent historic site to the proposed improvement. Therefore, these standards are not applicable.

33.130.207 *Minimum Density*

Response: The proposed improvement does not include construction of residential dwellings of any style; consequently, the minimum density requirements of this section are not applicable.

33.130.210 *Height*

Response: The CX zoning district permits a base height of 75 feet. The proposed structure has a height of approximately 13 feet; therefore, this standard is met.

33.130.212 *Floor Area and Height Bonus Options*

Response: No bonuses to the floor area or building height are requested and/or required. Therefore, this section is not applicable.

33.130.215 *Setbacks*

Response: As a basic utility structure in public right-of-way, the application of traditional setbacks from adjacent property lines or frontage streets cannot be directly applied to this project. However, in an attempt to mimic the feeling of standard setbacks, the proposed structure will be set back 10 feet from the curb of NW 1st Avenue and 12 feet from the NW Naito Parkway off-ramp. By providing separation between the structure and nearby roadways, it gives the impression of setback compliance despite there not being nearby property lines to measure from. Therefore, although these standards are not directly applicable, the intent of the standards has been met.

33.130.220 *Building Coverage*

Response: Similar to the applicant's response to FAR standards, the proposed improvement is located within public right-of-way, so there is not a defined single unit of land that can be used to measure building coverage. Therefore, this standard is not applicable.

33.130.222 *Building Length and Façade Articulation*

Response: The proposed improvement is zoned CXd by the City of Portland; therefore, this section is not applicable.

33.130.225 *Landscaped Areas*

Response: The proposed improvement does not abut any residential zones, does not include the construction of parking lots, and does not have any required setbacks. Consequently, there will be

minimally required landscaping associated with this application. While some groundcover will be planted as illustrated on the attached architectural drawings, the amount and scale of landscaping is limited due to the extent of existing utility infrastructure in the public right-of-way where the proposed structure is located. Lastly, no ecoroof is proposed by this application.

33.130.227 *Trees*

Response: The proposed improvement will prune and preserve existing trees on the opposing side of NW 1st Avenue; however, due to the position and density of utility infrastructure, there is not an opportunity to plant additional trees within the public right-of-way near the proposed site.

33.130.228 *Required Outdoor Areas*

Response: The proposed improvement does not include the construction of residential uses; therefore, this section is not applicable.

33.130.230 *Windows*

Response: The proposed structure will not be routinely occupied by employees or frequented by visitors; it will continue basic utility infrastructure. As such, windows will not accomplish any of the purposes outlined in this section. Rather, infrastructure or mechanical equipment is traditionally required to be screened from public view. In compensation for not including windows in the design of this structure, TriMet is proposing a visually layered approach (building surface with mural visible through screening) to coordinate with the Design Review Committee to determine if there are other design opportunities to create an engaging pedestrian space.

33.130.235 *Screening*

Response: All mechanical equipment will not be visible from nearby streetscape as no windows will be provided. In addition to this structure, a non-metallic fence will be constructed to provide additional screening as there is no opportunity to plant large trees due to the position and density of utility infrastructure. Therefore, this section is met.

33.130.24 *Pedestrian Standards*

Response: The proposed use will not be accessible to the public as a basic utility structure. Therefore, an on-site pedestrian circulation system is not required.

33.130.242 *Transit Street Main Entrance*

Response: The proposed improvement does not have frontage on a transit street. Therefore, this section is not applicable.

33.130.245 *Exterior Display, Storage, and Work Activities.*

Response: No exterior activities or workspace are proposed by this application. Therefore, this section is not applicable.

33.130.250 *General Requirements for Small Housing Types*

Response: The proposed improvement does not include construction of any residential uses; therefore, this section is not applicable.

33.130.255 *Trucks and Equipment*

Response: There will not be any business vehicles frequently parked at the site post construction. While occasionally, there might be a maintenance vehicle on-site to perform equipment checks but this occurs on an intermittent and short-term basis. The existing driveway will be retained for off-street parking during intermittent maintenance needs. Therefore, this section is not applicable.

33.130.260 *Drive-Through Facilities.*

Response: The proposed improvement does not include the construction of any drive-through facilities. Therefore, this section is not applicable.

33.130.265 *Detached Accessory Structures*

Response: The proposed improvement does not include the construction of any accessory structures. Therefore, this section is not applicable.

33.130.270 *Fences.*

Response: While a conceptual sketch of the proposed fencing is included in the architectural drawings, the exact details of the fence have not been determined. Details and illustrations demonstrating compliance with these standards will be provided during the building permit review process. The fence will not be electrified. Therefore, these standards will be met at a future date and time.

33.130.275 *Demolitions*

Response: All nearby trees will be preserved during demolition of the nearby structure, which is not an historic resource. As mentioned throughout this application narrative, the site will be landscaped to the extent reasonable provided the constraints. Therefore, to the extent reasonable, this section has been met.

33.130.285 *Nonconforming Development*

Response: The applicant is not opting into the regulations of Chapter 33.258.

33.130.290 *Parking, Loading, and Transportation and Parking Demand Management*

Response: The proposed structure will not be accessible to the public. Consequently, the proposed use does not need vehicle parking, bicycle parking, or loading areas. Therefore, this section is not applicable.

33.130.292 *Street and Pedestrian*

Response: The proposed improvement site is well under five acres. Therefore, this section is not applicable.

33.130.295 *Signs*

Response: No signage is included in this application.

33.130.305 *Superblock Requirements*

Response: The proposed improvement is located within public right-of-way and is not located on an established block that includes vacated rights-of-way. Therefore, this section is not applicable.

33.130.310 *Recycling Areas*

Response: No recycling areas are included in this application.

IV. Design Overlay Zone (33.420)

33.420.041 *When Design Review or Meeting Design Standards is Required*

Response: The proposed structure replacement is classified as a non-standard improvement in the public right-of-way; consequently, the project must meet the design standards or be approved through design review.

33.420.045 *Items Exempt From This Chapter*

Response: As identified by the applicant's previous response, the proposed structure replacement is classified as a non-standard improvement in public right-of-way and must comply with the provisions of this chapter when applicable.

33.420.050 *Design Standards*

Response: The proposed improvement is located within the Central City Plan District boundary; consequently, this proposal does not qualify for the implementation of the design standards, rather a design review will be required.

33.420.060 *Design Guidelines*

Response: The proposed improvement is subject to design review due to its position within the Central City Plan District.

V. Central City Plan District (33.510)

33.510.020 *Where the Regulations Apply*

Response: The proposed improvement is located within the boundaries of the Central City Plan District as outlined on Map 510-1; consequently, the regulations of this chapter apply to this project.

33.510.030 *Application of Regulations Along Proposed Right-of-Way and Accessways*

Response: The proposed improvement is located in existing public right-of-way and is not located near any proposed right-of-way and/or accessways. Therefore, this section does not apply.

33.510.100 *Vehicle Repair and Vehicle Sales or Leasing*

Response: This application does not propose vehicle repair, sales, or leasing; therefore, this section does not apply.

33.510.110 *Mixed Use Waterfront Development*

Response: The proposed improvement is not located within the Mixed-Use Waterfront area; consequently, this section does not apply.

33.510.112 *Commercial Parking*

Response: No commercial parking is included in this application; therefore, this section does not apply.

33.510.114 *Exemptions for Portland State University*

Response: The proposed improvement is not located within the University District/South Downtown district. Therefore, this section is not applicable.

33.510.115 *Additional Uses Allowed in the Open Space Zone*

Response: The proposed improvement is not located within an open space zoned area; therefore, this section is not applicable.

33.510.116 *Retail Sales And Service Uses for Specified Sites in the CX and EX Zones*

Response: The proposed improvement does not include a retail sales and/or service use; therefore, this section is not applicable.

33.510.117 *Retail Sales And Service and Office Uses in the RX Zone*

Response: The proposed improvement is not located in the RX zoning district; therefore, this section is not applicable.

33.510.119 *Retail Sales And Service and Office Uses in the IG1 Zone*

Response: The proposed improvement is not located in the IG1 zoning district; therefore, this section is not applicable.

33.510.120 *Retail Sales And Service and Office Uses in Specified Historic Resources in the IH Zones*

Response: The proposed improvement is not located in the IH zoning district; therefore, this section is not applicable.

33.510.121 *Residential Uses in the EX Zone*

Response: The proposed improvement is not located in the EX zoning district; therefore, this section is not applicable.

33.510.200 *Floor Area Ratios*

Response: The proposed improvement is located within public right-of-way, so there is not a defined single unit of land that can be used to measure floor area ratio. Therefore, this standard is not applicable.

33.510.205 *Floor Area Bonus and Transfer Options*

Response: No bonuses to the floor area or building height are requested and/or required. Therefore, this section is not applicable.

33.510.210 *Height*

Response: The proposed structure is approximately 13 feet tall, well under the base height for this area. Therefore, this standard is met.

33.510.211 *Shadow Study Required*

Response: The proposed structure does not exceed 100 feet in height; therefore, this section is not applicable.

33.510.215 *Required Building Lines*

Response: The proposed improvement is not located on any of the required building lines identified on Map 510-7; therefore, this section is not applicable.

33.510.220 *Ground Floor Windows*

Response: The proposed structure will contain infrastructure needed to support the nearby TriMet rail line. It will not be routinely occupied by staff or visitors, so no windows are provided on the attached architectural drawings. In place of ground floor windows, artwork may be provided on each street-facing façades. This alternative will be permitted through a separate review process.

33.510.223 *Bird-Safe Exterior Glazing*

Response: As mentioned in the applicant's previous response, the proposed structure will not incorporate windows into the design. As a result, there is no need for bird-safe exterior glazing. Therefore, this section does not apply to the proposed improvement.

33.510.225 *Ground Floor Active Uses*

Response: The proposed structure replacement is a non-standard improvement in the public right-of-way and is a structure intended to contain utilities needed to support a nearby TriMet rail line. It does not contain an active ground floor use. As a utility use, this section is not applicable.

33.510.230 *Required Residential Development Areas*

Response: The proposed improvement does not include a residential use; therefore, this section is not applicable.

33.510.240 *Drive-Through Facilities*

Response: The proposed improvement does not include a drive-through facility; therefore, this standard is met.

33.510.242 *Demolitions*

Response: While the existing structure will be removed, it will be immediately replaced by a new structure. Therefore, this section is not applicable to this project.

33.510.243 *Ecoroofs*

Response: The proposed improvement does not include the construction of an ecoroof; therefore, this section is not applicable.

33.510.244 *Low-Carbon Buildings*

Response: The proposed structure does not exceed a net building area of 50,000 square feet; therefore, this section is not applicable.

33.510.250 *Additional Standards in the Pearl Subdistrict. Sites in the Pearl subdistrict south of the Fremont Bridge and north of NW Lovejoy Street must meet the following standards:*

Response: The proposed improvement is not located within the Pearl Subdistrict; therefore, this section is not applicable.

33.510.251 *Additional Standards in the South Waterfront Subdistrict*

Response: The proposed improvement is not located within the South Waterfront Subdistrict; therefore, this section is not applicable.

33.510.252 *Additional Standards in the Central Eastside Subdistrict*

Response: The proposed improvement is not located within the Central Eastside Subdistrict; therefore, this section is not applicable.

33.510.253 *Greenway Overlay Zone in South Waterfront Subdistrict*

Response: The proposed improvement is not located within the greenway overlay zone within the South Waterfront Subdistrict; therefore, this section is not applicable.

33.510.255 *Central City Master Plans*

Response: This application does not include a Central City Master Plan and is not located within an existing master plan; therefore, this section does not apply to the proposed project.

33.510.257 *Signs for Additional Uses Allowed in the Open Space Zone*

Response: No signs are proposed by this application; therefore, this section does not apply.

33.510.261 *Parking Built After July 9, 2018*

Response: No parking is included in this application; therefore, this section does not apply to the proposed project.

33.510.262 *Parking Built before July 9, 2018*

Response: No parking is included in this application; therefore, this section does not apply to the proposed project.

33.510.263 *Parking and Loading Access*

Response: No parking is included in this application; therefore, this section does not apply to the proposed project.

VI. Conclusion

This application narrative and accompanying plan set demonstrate that all applicable provisions of the City of Portland Title 33, Planning and Zoning (Title 33) are satisfied.