MILWAUKIE
Dogwood City of the West

To: **Design and Landmarks Committee**

From: **Li Alligood, Assistant Planner and DLC Liaison**

Date: **May 16, 2012**

Subject: **Preparation for May 23, 2012, Meeting**

Greetings! We will be in the City Hall Council Chambers for next Wednesday's meeting at 6:30 p.m. See Enclosure 1 for the meeting agenda.

Façade Improvement Program Applications

The Committee will review a new Façade Improvement Program application and approve or deny the request. Please review the application thoroughly prior to the meeting. See Enclosure 3 for the staff report and attachments.

Milwaukie Light Rail Station

The DLC will be holding a public meeting to review the design of the Milwaukie Light Rail Station (DR-12-04). Please review the materials thoroughly prior to the meeting, and contact staff with any questions. See Enclosure 4 for the staff report and attachments

See you next Wednesday at 6:30 p.m.!

Enclosures

1. May 23, 2012, meeting agenda
2. April 2, 2012, meeting minutes
3. Façade Improvement Program application
4. Milwaukie Light Rail Station staff report

AGENDA

MILWAUKIE DESIGN AND LANDMARKS COMMITTEE
Wednesday, May 23, 2012, 6:30 PM

CITY HALL COUNCIL CHAMBERS
10722 SE MAIN ST

1.0 Call to Order - Procedural Matters

2.0 Meeting Notes – Motion Needed

2.1 April 2, 2012

3.0 Information Items

4.0 Audience Participation – This is an opportunity for the public to comment on any item not on the agenda

5.0 Public Meetings – Public meetings will follow the procedure listed on reverse

5.1 Summary: Design Review of Milwaukie Light Rail Station (DR-12-04)
Presenters: Li Alligood, Assistant Planner

6.0 Worksession Items

6.1 Summary: Façade Improvement Program Application Review (10921 SE Main St)
Presenters: Li Alligood, Assistant Planner

7.0 Other Business/Updates

7.1 June meeting date

8.0 Design and Landmark Committee Discussion Items – This is an opportunity for comment or discussion for items not on the agenda.

9.0 Forecast for Future Meetings:

June TBD	1. Design Review meeting for light rail systems building (DR-12-05) 2. 2012/2012 DLC Work Plan
July 2, 2012	1. Cancel?
July 17, 2012	1. City Council update

Milwaukie Design and Landmarks Committee Statement

The Design and Landmarks Committee is established to advise the Planning Commission on historic preservation activities, compliance with applicable design guidelines, and to review and recommend appropriate design guidelines and design review processes and procedures to the Planning Commission and City Council.

1. **PROCEDURAL MATTERS.** If you wish to speak at this meeting, please fill out a yellow card and give to planning staff. Please turn off all personal communication devices during meeting. For background information on agenda items, call the Planning Department at 503-786-7600 or email planning@ci.milwaukie.or.us. Thank You.

2. **DESIGN AND LANDMARK COMMITTEE MEETING MINUTES.** Approved DLC Minutes can be found on the City website at www.cityofmilwaukie.org

3. **CITY COUNCIL MINUTES** City Council Minutes can be found on the City website at www.cityofmilwaukie.org

4. **FORECAST FOR FUTURE MEETING.** These items are tentatively scheduled, but may be rescheduled prior to the meeting date. Please contact staff with any questions you may have.

Public Meeting Procedure

Those who wish to testify should come to the front podium, state his or her name and address for the record, and remain at the podium until the Chairperson has asked if there are any questions from the Committee members.

1. **STAFF REPORT.** Each design review meeting starts with a brief review of the staff report by staff. The report lists the criteria for the land use action being considered, as well as a recommendation with reasons for that recommendation.

2. **CORRESPONDENCE.** Staff will report any verbal or written correspondence that has been received since the Committee was presented with its meeting packet.

3. **APPLICANT'S PRESENTATION.**

4. **PUBLIC TESTIMONY IN SUPPORT.** Testimony from those in favor of the application.

5. **NEUTRAL PUBLIC TESTIMONY.** Comments or questions from interested persons who are neither in favor of nor opposed to the application.

6. **PUBLIC TESTIMONY IN OPPOSITION.** Testimony from those in opposition to the application.

7. **QUESTIONS FROM COMMITTEE MEMBERS.** The committee members will have the opportunity to ask for clarification from staff, the applicant, or those who have already testified.

8. **REBUTTAL TESTIMONY FROM APPLICANT.** After all public testimony, the Committee will take rebuttal testimony from the applicant.

9. **CLOSING OF PUBLIC MEETING.** The Chairperson will close the public portion of the meeting. The Committee will then enter into deliberation. From this point in the meeting the Committee will not receive any additional testimony from the audience, but may ask questions of anyone who has testified.

10. **COMMITTEE DISCUSSION AND ACTION.** It is the Committee's intention to make a recommendation this evening on each issue on the agenda. Design and Landmark Committee recommendations are not appealable.

11. **MEETING CONTINUANCE.** Prior to the close of the first public meeting, *any person* may request an opportunity to present additional information at another time. If there is such a request, the Design and Landmarks Committee will either continue the public meeting to a date certain, or leave the record open for at least seven days for additional written evidence, argument, or testimony.

The City of Milwaukie will make reasonable accommodation for people with disabilities. Please notify us no less than five (5) business days prior to the meeting.

Milwaukie Design and Landmarks Committee:

Greg Hemer, Chair
Jim Perrault, Vice Chair
Scott Barbur
Becky Ives
Chantelle Gamba

Planning Department Staff:

Katie Mangle, Planning Director
Scot Siegel, Contract Planning Project Manager
Brett Kelver, Associate Planner
Ryan Marquardt, Associate Planner
Li Alligood, Assistant Planner
Alicia Martin, Administrative Specialist II
Marcia Hamley, Administrative Specialist II

CITY OF MILWAUKIE
DESIGN AND LANDMARKS COMMITTEE
MEETING MINUTES
Milwaukie City Hall
10722 SE Main St
MONDAY, APRIL 2, 2012
6:30 PM

DLC MEMBERS PRESENT
Greg Hemer, Chair
Jim Perrault, Vice Chair
Becky Ives
Scott Barbur

STAFF PRESENT
Li Alligood, Assistant Planner, (DLC Liaison)
Katie Mangle, Planning Director

MEMBERS ABSENT
Chantelle Gamba

1.0 Call to Order – Procedural Matters

Chair Greg Hemer called the meeting to order at 6:32 p.m. and read the conduct of meeting format into the record.

2.0 Design and Landmarks Committee Minutes

2.1 March 5, 2012

DLC Member Jim Perrault moved to approve the March 5, 2012, Design and Landmarks Committee minutes as presented. DLC Member Becky Ives seconded the motion. The minutes were approved unanimously.

Note: The information presented constitutes summarized minutes only. The meeting audio is available from the Planning Department upon request.

3.0 Information Items

Li Alligood, Assistant Planner, introduced Scott Barbur, a new member of the Committee. He would be appointed by City Council on April 3 and was at the meeting as an observer.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda. There was none.

5.0 Public Meetings – None

6.0 Worksession Items

Item 6.2 was taken out of order.

6.2 Review of FIP grant revision request from Bernard's Garage

Ms. Alligood provided an overview of the request. The Committee had asked the applicant to return with additional information about the sidewalk regarding on 21st Ave and its impact on the building.

Siri Bernard, applicant, and **Jim Bernard, property owner**, stated that TriMet would start regrading the sidewalks in the summer of 2012 and they did not yet know what the impact on the office building would be.

The Committee unanimously agreed to grant the applicant's request to remove the awning from the approved scope of work, and directed staff to reimburse the applicant for the remainder of the work that had been done.

6.1 Façade Improvement Program Grant application: 10921 SE Main St

Ms. Alligood provided an overview of the request. The applicant had requested matching grant funds to replace the storefront windows and doors.

The Committee requested additional information before making a decision.

- Suggested the applicant consider installing an exterior light fixture to deter customers of the Brew from leaning against the window.
- Asked staff to tell the applicant that additional funds were available due to the revised scope of work for the Bernard's Garage grant.
- Requested additional information regarding the aluminum window frame color.

6.3 Land use training

Katie Mangle, Planning Director, provided a land use training via PowerPoint presentation.

7.0 Other Business/Updates

7.1 May meeting date

Ms. Alligood noted that there would be a design review meeting for the light rail station, DR-12-04, in May. She asked the Committee if they would be able to reschedule the regular May meeting to the 23rd. **The Committee** agreed to reschedule the meeting in order to hold the design review meeting for the light rail station.

8.0 Design and Landmarks Committee Discussion Items – None

9.0 Forecast for Future Meetings:

May 23, 2012	1. Façade Improvement Program application review (tentative)
	2. Design review meeting for light rail station (DR-12-04)
June 4, 2012	1. 2012-2013 work plan

Meeting adjourned at approximately 8:45 p.m.

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Greg Hemer, Chair

MILWAUKIE
Dogwood City of the West

To: **Design and Landmarks Committee**

Through: **Scot Siegel, Contract Planning Project Manager**
for Katie Mangle, Planning Director

From: **Li Alligood, Assistant Planner**

Date: **May 16, 2012, for May 23, 2012, Design Review Meeting**

Subject: **File:** DR-12-04

Applicant: Jeff Joslin, KLK Consulting, Inc.

Owner(s): TriMet[1]

Address: 11301 SE 21st Ave and Union Pacific Railroad property between Lake, 21st Ave, and Adams St

Legal Description (Map & Taxlot): 1S1E36BC03300

NDA: Historic Milwaukie

ACTION REQUESTED

Recommend that the Planning Commission approve application DR-12-04 with the recommended Findings and Conditions of Approval found in Attachments 1 and 2. This action would recommend approval of a design for the Portland Milwaukie Light Rail (PMLR) station in downtown Milwaukie.

BACKGROUND INFORMATION

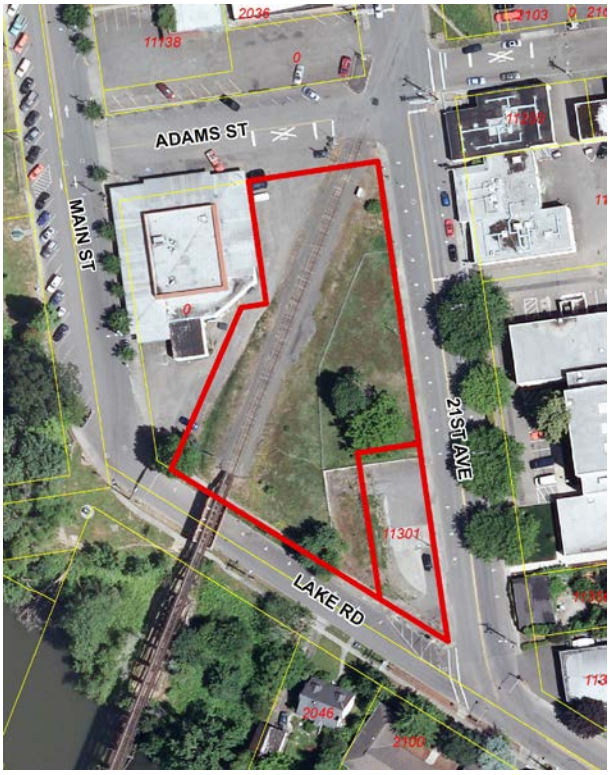
A. Site and Vicinity

The site is triangular in shape and is comprised of an existing tax lot at 11301 SE 21st Ave and a portion of the Union Pacific Railroad (UPRR) property between Lake Rd, 21st Ave,

[1] The site at 11301 SE 21st Ave is currently owned by Jeffrey Horton; the Union Pacific Railroad site is under UPRR ownership. TriMet has contracted with Mr. Horton for the purchase of the properties, and has a signed Purchase and Sale Agreement for the Union Pacific Railroad property where the station is to be located.

and Adams St. The site contains a paved area in the northwest corner, rail tracks through the center, and a surface parking lot in the southeast corner.

The surrounding area consists of government and commercial uses to the west; a surface parking lot to the north; office and light industrial uses to the east; residential areas to the southeast, and Lake Road and Kellogg Lake to the south. The images below show an aerial view of the site (left); the site from the north at 21st Ave and Adams St (top right); and the site from the south at Lake Rd (bottom right).



B. Zoning Designation

Downtown Office Zone (DO). A portion of the southern end of the site is within 100 feet of the Kellogg Lake protected natural resource areas.

C. Comprehensive Plan Designation

Town Center (TC).

D. Land Use History

There are no previous land use actions by the City on record for this site. However, the entire PMLR alignment has an existing land use approval that was issued by Metro in 2008.[2] This land use final order (LUFO) was made pursuant to House Bill 3478 (1996),

[2] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

which provides for the review and siting of regional transportation facilities through local jurisdictions.

House Bill 3478 allows the City to review the light rail station against the City's design and development standards to ensure that it respects Milwaukie's existing small town character, fine-grained development pattern, and future development aspirations. The City may subject the proposed light rail station to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the light rail station in such a way as to prevent the implementation of the 2008 LUFO.

E. Proposal

The applicant is seeking land use approvals for construction of a light rail station, and a determination that submitted materials meet a condition of approval of land use file #WG-11-01 (Kellogg Bridge) related to the jump span lighting. See Attachment 3 for details.

The proposal includes the following:

- Kellogg Bridge jump span lighting
- Light rail platform and fixtures
- Pedestrian connections to the north and south
- On-site retaining walls
- Bike plaza

Although construction of a station building is anticipated on this site, it will be subject to review at the time of design and construction. This review is limited to the station itself.

The project requires approval of the following applications by the Planning Commission:

1. Design Review (DR-12-04)
2. Community Service Use (CSU-12-03)
3. Variance Review (VR-12-02)

The Design and Landmarks Committee will review and make a recommendation to the Planning Commission only on the Design Review portion of the application.

F. Specific Design Elements

The applicant has refined the design of the proposed light rail station over the last several months in consultation with its design and engineering team and based on feedback from City staff and the DLC. As such, many design issues have been discussed, and some have been resolved, in advance of the DLC's review of this application. Below is an overview of the key design elements under review, including design alternatives that have been considered and the applicant's current design proposal. See Attachment 4 for detailed comments from City staff on the light rail station design from a project partner perspective as opposed to a regulatory perspective.

- Jump span over Lake Rd – During the land use review for the Kellogg Bridge (WG-11-01), the DLC requested additional information and different light fixture options for lighting underneath the Kellogg Bridge jump span. The Planning Commission

established a condition of approval requiring submittal of this information for consideration during the land use proceedings for the Milwaukie light rail station. The revised proposal includes linear LED luminaires recessed within the jump span slabs and placed at regular intervals. The applicant's photometric analysis indicates that the proposed fixtures will provide uniform lighting beneath the jump span, which minimizes glare and deep shadows. See Exhibits P 5A-B and P 6A-E of the application for details.

- Wall finishes – The surface of the pre-cast concrete abutment wall (north side of Lake Rd), safety walls (west of the platform) and retaining walls on site (east of the platform) will be textured with a formliner that resembles a rusticated masonry surface to create a unified appearance and visual interest at the Lake Rd and 21st Ave pedestrian level. The applicant did not include detail about the on-site retaining walls or safety walls in the application, though it is referenced in the structural plans in Exhibit T 21 of the application. See Exhibits P2 – P4 of the application for illustrations of the Lake Rd abutment wall. See Exhibit T21 for structural elevations of the retaining wall to the east of the future platform.
- Platform paving – The "furniture zone" of the platform surface will be paved with pale gray pavers in a herringbone pattern instead of flat concrete to provide detailing and texture. The edges of the platform will be paved in dark gray for contrast. The applicant did not include detail about the platform pavers in the application, though they are referenced in the architectural plans in Exhibit T31.
- Fixtures – Most station fixtures will be painted "Milwaukie black" instead of standard gray or stainless steel including: ornamental railings; fencing; platform shelter poles and rafters;[3] trash cans; bench bases; TVM shelter rafters; bike shelter rafters; bike racks; bollards; and OCS poles. The following "elements of consistency" will be stainless steel: handrails; platform light fixtures; wind screens; bench seating surfaces; leaning rails; electrical cabinets; and TVM shelter posts.
- Fencing and railings – Ornamental "Milwaukie black" metal railings are proposed instead of standard steel railings to reinforce Milwaukie's small town urban character and high standards of design. Fencing on the retaining wall between the tracks is a delicate, black metal design rather than chain link.
- Lake Rd pedestrian access – Pedestrian access to the south end of the station is via stairs from Lake Rd. The stairs are integrated into the Lake Rd abutment wall and are flanked by ornamental black railings to the south and terraced stormwater plantings to the north. A light fixture at the landing is Milwaukie streetscape standard rather than TriMet standard in order provide a visual connection to the street below. The terraced stormwater planters are wrapped in weathering steel to reference the bridge structure and other planters; the terraced planters and landscaping at the base of the stairs softens the effect of the concrete abutment wall. Use of stairs rather than a ramp preserves space on site for future building development and does not negatively impact patron access to the station.[4]
- Cantilevered platform access – Ornamental black railings guide passengers from the pedestrian access to the ticket vending machines (TVMs) and platforms. A light

[3] With the exception of a stainless steel "sock" at the base of the poles.
[4] A station building is planned for the site. The building will be a private development and will be subject to review at the time of planning and construction.

fixture on the platform access is Milwaukie streetscape standard rather than TriMet standard in order provide a visual and design connection to the street below. See Exhibits P2 – P5 and P9 of the application for illustrations.

- Platform shelter – The platform shelter is glass-roofed with "Milwaukie black" metal poles and rafters. Public art is integrated into the design of the shelter, as well as a bench and wind screen.
- Stormwater treatment facilities – Stormwater treatment facilities are integrated into the site and are located in a plaza in the southeastern corner of the site, at the base of the pedestrian stair access from Lake Rd, and in terraced planters to the north of the pedestrian stair access. The dispersal and integration of the stormwater plantings softens the visual impact of the concrete areas of the site and provides aesthetic benefits.

G. Compliance with the Downtown Design Guidelines

Overall, the light rail station meets the intent and spirit of the Milwaukie Downtown Design Guidelines by reinforcing Milwaukie's sense of place, respecting the natural environment, creating view opportunities, integrating site-specific art, enhancing the pedestrian environment, creating compatible and well-designed structures that respond to their surroundings, and using lighting to highlight key gateways access points.

Though the light rail station is utilitarian in purpose—and contains all of the necessary elements to carry out its function (e.g. OCS poles, safety railings, TVM shelters)—it has been thoughtfully designed by a team of architects and urban designers to fit into the existing fabric of downtown Milwaukie. The scale of the station is appropriate for the site and for south downtown.

The overall design of the station respects the character of downtown Milwaukie through its use of uncluttered design, simple detailing, a subdued palette of materials, station-specific fixtures in "Milwaukie black," and integration of stormwater plantings and public art into the site. The cantilevered platform access will provide views to the Willamette River and Kellogg Lake that are not currently available in the subject location and cannot be provided elsewhere.

The rusticated ashlar stone formliner used on the Lake Rd abutment wall, the integration of public art with the light rail station design, and the provision of stormwater plantings at the base of the wall add visual interest at the pedestrian level south of the station. The construction of a bicycle plaza, the use of decorative railings to guide pedestrians to the northern entrance, and the installation of landscaping adjacent to Adams St add visual interest at the pedestrian level north of the station.

The use of materials and finishes with depth and texture, traditional materials such as concrete texturized with rusticated stone formliners, weathering steel, and "Milwaukie black" fixtures provide a sense of permanence and quality and respect the City's urban design aspirations.

The Milwaukie standard lighting on the access stairs and cantilevered platform contributes to the overall detailed design of the southern access, and the lighting under the Lake Rd jump span articulates the bridge design, creates interesting visual effects, and adds a measure of safety and comfort for pedestrians.

KEY ISSUES

Summary

Staff has identified the following key issues for the Design and Landmark Committee's deliberation. Aspects of the proposal not listed below are addressed in the Findings (see Attachment 1) and generally require less analysis and discretion by the Committee.

A. Does the jump span lighting proposal meet the condition of approval of WG-11-01 (Kellogg Bridge)?

B. Does the proposal meet the guidelines related to reinforcing Milwaukie's sense of place?

C. Does the proposal meet the guidelines related to reinforcing the pedestrian system, providing places for stopping and viewing, and creating successful outdoor spaces?

Analysis

A. Does the jump span lighting proposal meet the condition of approval #6 of WG-11-01 (Kellogg Bridge)?

The Planning Commission adopted the conditions of approval for DR-11-01 (Kellogg Bridge) related to the jump span lighting. The applicant has provided a memo outlining compliance with the condition of approval (see Attachment 3B) and illustrations of the proposed lighting design (see Attachment 3C).

The DLC previously reviewed the proposed lighting treatment and generally approved of the design. However, a more detailed discussion of the proposal would be beneficial, as the applicant is seeking a recommendation that the Planning Director determine that this condition of approval is satisfied.

The proposal is intended to create an interesting pattern of lights on the underside of the jump span, and also references the pattern of the "botts" to be installed beneath the bridge. From an urban design standpoint, the lighting proposal is elegant and streamlined and appears to meet the spirit of the condition.

- The applicant has provided additional information regarding how the light interacts with the "ceiling" of the jump span and creates a comfortable, attractive, and safe pedestrian environment. Light will reflect off the walls, roadway, and sidewalks and will create a glow on the ceiling of the space.
- The applicant's exhibits and photometric studies indicate that the fixtures would be linear LED luminaires; would light the area beneath the jump span to an average level of 3.05 foot candles in nighttime conditions; and would provide uniform lighting levels outside of and underneath the jump span, which minimizes glare and deep shadows. A well-lit area with minimal shadows and glare increases the pedestrian's sense of safety and comfort.
- A total of 42 light fixtures are proposed: 24 linear LED recess mounted fixtures, which are recessed within the jump span slabs at regular intervals; 16 linear LED wall-wash fixtures surface-mounted at the intersection of the wall and jump span and parallel to the abutment and pier walls; and two linear LED surface-mounted fixtures on the back side of the piers on the south side of Lake Rd. Although the proposed fixtures are

modern, their minimal dimensions and recessed installation create a patterned effect and allows the fixtures to be visually subordinate to the jump span design.

The wall-wash fixtures will be surface mounted with a steel angle shield that hides the fixtures. The steel angle shield will be galvanized to allow it to blend in with the concrete surface and not draw attention to it. The fixtures behind the piers will also be surface-mounted, but are screened from pedestrian view by a 6-in concrete lip where the concrete deck meets the steel tubs at the end of the jump span.

B. Does the proposal meet the guidelines related to reinforcing Milwaukie's sense of place?

The guidelines related to reinforcing Milwaukie's character are important, but highly subjective.[5] For this proposal, staff believes the key elements of the guideline are as follows:

- Emphasize special relationships at the pedestrian level first and foremost
- Exhibit a small-town urban character, and
- That it [the proposal] not be universal or generic (could be found anywhere)

Staff believes that the light rail station meets this guideline. The primary focus of the station is the pedestrian experience and connections to Adams St and the future Main Street plaza to the north, and to Lake Rd, Dogwood Park, the future Kellogg Lake pedestrian bridge, and future Main Street plaza to the south. The connections are featured through the detailing of the Lake Rd abutment wall, landscaping at the base of the wall, installation of public art at Lake Rd and 21st Ave, and the use of ornamental railings and landscaping that guide pedestrians to the north entrance.

The proposed planting of dogwood trees and other flowering ornamental plants also reinforces Milwaukie's sense of place and small town character. The proposed bicycle plaza at the north end of the site also acknowledges Milwaukie's small town urban character by providing an appropriately scaled public gathering place.

The station incorporates many location-specific design details, including: ornamental railings with the City's dogwood logo in the center; "Milwaukie black" railings, fencing, shelter poles and rafters, and bike racks; Milwaukie standard street lights and decorative bollards; and textured concrete walls.

C. Does the proposal meet the guidelines related to reinforcing the pedestrian system, providing places for stopping and viewing, and creating successful outdoor spaces?

For this proposal, staff believes the key elements of these guidelines are the following:

- Pedestrian routes should not be circuitous or indirect
- Provide places for stopping and viewing adjacent to parks and plazas

Staff believes that the light rail station substantially meets these guidelines. Pedestrian access from the north is somewhat indirect, due to the need to guide pedestrians safely across three sets of tracks. However, as stated in the memo from the City's light rail design

[5] Downtown Milwaukie Design Guidelines p.11.

team (see Attachment 4), the pedestrian connection does follow the adopted South Downtown Concept Plan and the vision for this area of downtown.

The north end of the site contains a plaza with sheltered bike racks, bike lockers, and a large-scale granite sculpture. The plaza is bordered on the west by a 4 ft retaining wall with ornamental black railings mounted on top. That retaining wall is adjacent to the future second platform, which is not included in this application. Although the primary function of the plaza appears to be bicycle storage and/or a passage way to the station entrance, the plaza design does not encourage people to spend time there in order to view the public art, rest, or wait for disembarking passengers.

Staff is recommending a condition of approval related to the provision of seating within the plaza to allow opportunities to stop, rest, visit, and appreciate the art.

CONCLUSIONS

A. Staff recommendation to the Design and Landmarks Committee is as follows:

Recommend that the Planning Commission approve the Design Review application for the PMLR light rail station with the recommended findings and conditions of approval in Attachments 1 and 2.

CODE AUTHORITY AND DECISION-MAKING PROCESS

The portion of the proposal being considered by the Design and Landmarks Committee (DLC) is subject to the Milwaukie Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC).

- Chapter 19.1000 Review Procedures (specifically Section 19.1001 General Provisions, Section 19.1006 Type III Review, and Section 19.1011 Design Review Meetings)
- Section 19.907 Downtown Design Review
- Subsection 19.310.4 Downtown Zones Development Standards
- Subsection 19.310.6 Downtown Zones Design Standards

The Committee has 2 decision-making options as follows:

A. Recommend approval of the Design Review application subject to the recommended Findings and Conditions of Approval.

B. Recommend approval of the Design Review application with modified Findings and Conditions of Approval. Any modifications must be read into the record.

In addition to design review, this application is subject to Type III review by the Planning Commission at a public hearing. In the Type III review, the Planning Commission considers the DLC recommendation, assesses the application against the applicable provisions of the Milwaukie Zoning Ordinance, and evaluates testimony and evidence received at the public hearing.

The final decision on the Downtown Design Review application, which includes any appeals to the City Council, must be made by August 25, 2012, in accordance with the Oregon Revised

Statutes and the Milwaukie Zoning Ordinance. The applicant can waive the time period in which the application must be decided.

COMMENTS

The Design Review application was referred for comment to the following agencies and persons: City of Milwaukie Building, Engineering, and Community Development Departments; Clackamas County Fire District #1; Clackamas County; Metro; TriMet; and Oregon Department of Transportation.

It was also forwarded to the Historic Milwaukie and Island Station Neighborhood District Associations, and public copies were made available at City Hall, Ledding Library, and the Planning Department. Additionally, the Community Services Department advertised the DLC's design review meeting on the application through direct e-mailings and the City's PMLR project website.

Three comments on the application were received by the City on or before May 14, 2012, and are included in Attachment 4. Any additional comments received after this date but before the May 23, 2012, design review meeting will be brought to the meeting.

ATTACHMENTS

Attachments are provided only to the Design and Landmarks Committee unless noted as being attached. All material is available for viewing upon request.

1. Recommended Findings in Support of Approval (attached)
2. Recommended Conditions of Approval (attached)
3. Applicant's Narrative and Supporting Documentation dated April 25, 2012 (attached)
    A. Design Review Narrative
    B. Memo from applicant to City staff regarding jump span lighting, dated April 15, 2012
    C. Exhibits O – P (Illustrations)
    D. Exhibit T (Architectural Plans)
4. Comments Received (attached)
5. Exhibits List

Recommended Findings in Support of Approval

Staff has prepared the following Findings in Support of Approval for the Milwaukie Design and Landmarks Committee's review of application DR-12-04. Following the Design and Landmarks Committee (DLC) review of the proposal, the DLC's recommended findings will be incorporated into the staff report to the Milwaukie Planning Commission (PC) for the public hearing on this proposal. Findings for other aspects of the project (e.g., CSU review) are not included in this document.

1. Jeff Joslin, KLK Consulting, for TriMet ("applicant"), has submitted a design review application (DR-12-04) to construct the downtown Milwaukie light rail station ("station") as part of the Portland Milwaukie Light Rail (PMLR) project.

2. The applicant is seeking the following:

   A. Determination that the proposal satisfies the condition of approval of land use file #WG-11-01 (Kellogg Bridge) related to lighting under the jump span bridge.[1]

   B. Design review approval to construct a light rail station and associated on-site components, including: cantilevered station access platform; portion of abutment wall on Lake Rd east of the Kellogg Bridge; on-site retaining and safety walls; station platform; platform shelter; bike plaza, bike shelter; railings; landscaping; lighting; pedestrian connections between the station area and Adams St and 21st Ave to the north; and pedestrian connections between the station area and Lake Rd to the south.

3. The station site is approximately 1.1 ac, consisting of 11300 SE 21st Ave, Tax Lot 11E36BC03300 (0.16 ac), and the Union Pacific Railroad property to the west of the site, Tax Lot 11E36BCRAILS (0.94 ac). The site is developed with a paved area in the northwest corner, rail track in the center, and a surface parking lot in the southeast corner.

4. The PMLR alignment, which includes the location of specific project elements such as the station, has an existing land use approval that was issued by Metro in 2008.[2] This land use final order (LUFO) was made pursuant to House Bill 3478 (1996), which provides for the review and siting of regional transportation facilities through local jurisdictions. The City may subject the proposed station to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the light rail station in such a way as to prevent the implementation of the 2008 LUFO.

5. The application was submitted on March 27, 2012. It was initially deemed incomplete by City staff on April 6, 2012. The applicant revised and resubmitted the application on April 26, 2012, and the City deemed the application complete on April 27, 2012. The City has until August 25, 2012, to issue a final decision on the application.

6. The station site has a base zone designation of Downtown Office (DO) and a Comprehensive Plan designation of Town Center (TC). A portion of the site is within 100 feet of the Kellogg Lake water quality resource (WQR) and habitat conservation area (HCA) overlays.

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[1] Condition of approval #6 required submittal of jump span lighting design during the land use proceedings for the station.

[2] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

7. The proposal is subject to the Milwaukie Downtown Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC).

   - Chapter 19.1000 Review Procedures
   - Subsection 19.907 Downtown Design Review
   - Subsection 19.310.4 Downtown Zones Development Standards
   - Subsection 19.310.6 Downtown Zones Design Standards

8. The Design Review application was referred for comment to the following agencies and persons: City of Milwaukie Building, Engineering, and Community Development Departments; Clackamas County Fire District #1; Clackamas County; Metro; TriMet; and the Oregon Department of Transportation. It was also forwarded to the Historic Milwaukie and Island Station Neighborhood District Associations, and public copies were made available at City Hall, Ledding Library, and the Planning Department. Additionally, the Community Services Department advertised the DLC's design review meeting on the application through direct e-mailings and the City's PMLR project website.

9. The Design and Landmarks Committee (DLC) evaluated the application at a design review meeting on May 23, 2012. The DLC recommends that the Planning Commission adopt Finding 10, and the associated conditions of approval, as the findings and conditions of approval for the PMLR Station Design Review application.

10. MMC Subsection 19.907.7 contains the approval criteria for design review applications. The approval authority may approve, approve with conditions, or deny a design review application based on the following criteria:

    A. Compliance with Title 19 Zoning Ordinance.

       The applicable standards pertain to minimum floor area ratio (FAR), maximum setbacks, wall design, and roof design.

       i) Subsection 19.310.4.2 requires that new structures meet a minimum FAR of 0.5:1 and a maximum FAR of 3:1. The proposed structures are not enclosed and will not meet the minimum FAR requirement. The applicant has requested a variance to this standard.

       ii) Subsection 19.310.5 establishes a maximum setback of 10 ft from the street. The proposed structures are located within 0 and 50 ft of 21st Ave and Lake Rd. The applicant has requested a variance to this standard.

       iii) Subsection 19.301.6.2 contains the design standards for walls. The applicant is not proposing any wall-mounted mechanical equipment or any prohibited wall materials.

       iv) Subsection 19.301.6.4 contains design standards for roofs. The applicant is not proposing a flat or decorative roof.

       The applicant has submitted a request for a variance to the minimum FAR and maximum setback standards (VR-12-02), which will be reviewed concurrently with CSU-12-03 and DR-12-04.

       Subject to approval of VR-12-02, the DLC recommends finding that these standards have been met and that the approval criterion has therefore been met.

B. Substantial consistency with the Downtown Design Guidelines

Refer to the table below for detailed findings.

The DLC recommends finding that the proposal is substantially consistent with the Downtown Design Guidelines and this approval criterion has been met.

MILWAUKIE CHARACTER GUIDELINES	
Applicant Information	**Recommended Findings**
a. Reinforce Milwaukie's Sense of Place = Strengthen the qualities and characteristics that make Milwaukie a unique place.	
The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.	The overall design of the light rail station reinforces Milwaukie's sense of place as a small town with a long history of rail activity both in the form of freight rail (e.g. Union Pacific Railroad) and local and regional passenger rail (e.g. Portland Traction Company and Amtrak). As proposed, the light rail station respects Milwaukie's sense of place by emphasizing special relationships at the pedestrian level through detailing of abutment walls, the use of ornamental railings to guide pedestrians to the station, and the use of landscaping to soften the visual impact of concrete on the site. The cumulative effect of upgrading the elements on the site is a reduction of visual clutter. Additionally, the use of uncluttered design, simple detailing, a subdued palette of materials, station-specific fixtures in "Milwaukie black," and integration of stormwater plantings and public art into the site, and the graceful transition between the station and Lake Rd and nearby natural areas enhance Milwaukie's small town urban character. *The proposal meets this guideline.*
b. Integrate the Environment = Building design should build upon environmental assets.	
The design of the station area, respects the character of the nearby natural area through simple detailing, material selection, and landscaped areas. The cantilevered platform access to the south will afford unique views to the environmental assets of Kellogg Lake and Kronberg Park, as well as to the Willamette River and hills beyond.	As proposed, the design of the station respects the character of the Kellogg Lake natural area through its integration of stormwater plantings into the site design and provision of pedestrian access to Lake Rd, Dogwood Park, and the future Kellogg Lake pedestrian bridge. The cantilevered platform access provides view opportunities to Dogwood Park, Kellogg Lake,

Removal of invasive plants currently on the vacant site, and landscaping with appropriate replacements, will further enhance the immediate environmental quality. The inclusion of a water quality facility, where art is used to both highlight and celebrate stormwater, raises awareness of water quality at Kellogg Lake, south of the station, and the Willamette River to the west. The art is reflective of a waterfall and natural streambed. In addition, access and circulation patterns to the station facilitate enhanced pedestrian connections to existing parks and natural areas. Though the station does not consist of, or include, a building, the guideline is met.	and Kronberg Park. Additionally, the public art installation at the south end of the station provides an opportunity to view water as it moved through the terraced stormwater plantings, underneath the cantilevered platform access, and down a granite waterfall sculpture; the movement of the water allows for interaction. *The proposal meets this guideline.*
c. Promote Linkages to Horticultural Heritage = Celebrate Milwaukie's heritage of beautiful green spaces.	
The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.	As proposed, the design of the station respect's Milwaukie's heritage of green spaces through integration of stormwater plantings throughout the site, construction of a stormwater facility in the southeast corner of the site, a variety of landscaping to the east of the southbound light rail track, and installation of dogwood trees and shrubs to the west of the rail track. The "mill stone" sculpture references Milwaukie's horticultural heritage by incorporating Milwaukie's history as a center for flour production. *The proposal meets this guideline.*

d. Establish or Strengthen Gateways = Projects should use arches, pylons, arbors, or other transitions to mark special or primary entries and/or borders between public and private spaces.	
The carefully designed station platform is accentuated on all sides by railings with openings at designated safe entry points. The 42" high metal railings with historic Milwaukie motif demarcate the site and guide users to designated entry points. These access points are marked by small glass roofed shelters that house the Ticket vending machines. Signage and inlaid bronze lettering at the base of the ramps to the platform further delineate the threshold to the station area. The cantilevered platform access also serves as a promontory, connecting the station visually to public and private spaces beyond. The stone-patterned abutment walls, patterned masonry, landscaped plazas, unique Milwaukie-specific ornamental handrails, street enhancements, and public art; all serve to transition gracefully between the public station area and the surrounding private areas and properties. The guideline is met.	As proposed, the jump span over Lake Rd along with the abutment wall and support columns on either side create a unique passageway through which drivers, bicyclists, and pedestrians can travel. Though not designed with this purpose in mind, this passageway serves as a sort of a gateway into the south downtown area and to the future Main Street plaza. Specific design features of this passageway are evaluated under other guidelines. The northern access to the platform is a gateway a between the public street and the light rail platform. The transition is marked through a combination of a crescent shaped sidewalk connecting the station to Adams St and 21st Ave, ornamental railings, cobbled surface texture, signage, and TVM shelters and textured paving at the station entrance The southern gateway to the platform from Lake Rd is marked by integrated public art, terraced stormwater plantings adjacent to the stairs, ornamental railings, Milwaukie standard street lights on the landing and platform, signage, and TVM shelters and textured pavement at the platform entrance. *The proposal meets this guideline.*
e. Consider View Opportunities = Building designs should maximize views of natural features or public spaces.	
The station platform and platform access will result in new and very different viewpoints of Kellogg Lake, Kronberg Park, and views to the river and Greenway beyond, for the many passengers riding it each day. The plazas include seating, which allows viewing from, and between, these new public spaces. Though the project does not include building design, to the extent it is applicable, the guideline is met.	As proposed, the cantilevered platform access of the light rail station provides passengers with unique views of Dogwood Park, Kronberg Park, Kellogg Lake, and the Willamette River to the west that are not currently available by any other means. The bike plaza contains seating, which allows viewing of activity on the street and the landscaped areas to the south. *As conditioned, the proposal meets this guideline.*
f. Consider Context = A building should strengthen and enhance the characteristics of its setting, or at least maintain key unifying patterns.	
No buildings are proposed as part of the station application.	*This guideline is not applicable.*

g. Promote Architectural Compatibility = Buildings should be "good neighbors." They should be compatible with surrounding buildings by avoiding disruptive excesses. New buildings should not attempt to be the center of attention.	
No buildings are proposed as part of the station application.	*This guideline is not applicable.*
h. Preserve Historic Buildings = Historic building renovation, restoration, or additions should respect the original structure.	
No historic buildings are proposed to be renovated, restored, or expanded as part of the station application.	*This guideline is not applicable.*
i. Use Architectural Contrast Wisely = Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area, and clarify how the downtown is organized.	
The use of Milwaukie Black is proposed on all street elements and railings. However certain elements of the station shelters and the light poles are proposed as a bead blasted stainless steel. While this aligns with TriMet standards, the design offers an interesting contrast to the black to accentuate the platform area. When combined with the glass roof of the shelters, artwork, and railing design, the platform becomes a distinctive community amenity that is still easily recognized as part of the Light rail system. The simple detailing of the abutment wall, landscape plantings, and stairs along Lake Road add dramatic elements that will pronounce permanence and welcoming appropriate to this significant public work. The small public plazas - with associated landscaping, surface treatments, and furniture – will further serve to define the site as a public amenity, while providing a graceful transition between the neighborhood and the platform area. The south platform access, serving as a promontory overlooking Kellogg Lake and Kronberg Park, will further pronounce the station's public purpose in a dramatic-yet-integrated manner. The guideline is met.	As proposed, the design of the light rail station uses contrast in an intentional and thoughtful manner throughout. • Streetscape elements and railings, and most platform fixtures will be finished in "Milwaukie black." Platform light poles, TVM bases, bench surfaces, and the base of the shelter will be finished in bead blasted stainless steel. These elements create interest in the station composition and create a distinctive "Milwaukie" feel. • The textured surfaces of the pre-cast concrete abutment wall (north side of Lake Rd) for the southern access contrast with the smooth weathering steel face of the Kellogg Bridge jump span and terraced stormwater planting surfaces. • The design of the jump span and abutment wall on the north side of Lake Rd is rusticated and textured. The design of the jump span lighting is contemporary and creates interesting visual effects in contrast with the surrounding materials. *The proposal meets this guideline.*

j. Integrate Art = Public art should be used sparingly. It should not overwhelm outdoor spaces or render buildings mere backdrops. When used, public art should be integrated into the design of the building or public open space.	
TriMet's public art program installs a variety of artwork at locations along its light rail lines. The art is developed to be sensitively integrated, and specifically respectful of this guideline. The art has been vetted through the Public Art Advisory Committee, with input from the committed Milwaukie public and respective City Commissions in order to ensure the result is appropriate and contributory. The station art consists of two "milling wheels" at the north end near the bike shelters, carved "tree" columns under the station shelter, and a carved streambed and waterfall at the south end, included as part of the storm water treatment landscaping. These respective art elements are highly specific to the site, tied thematically to Milwaukie heritage. To the extent this guideline is applicable, it is met.	The proposal includes public art work in three locations on the station site: bicycle plaza at the north end; the platform shelter; and the southern platform entrance. The art elements are professionally designed by Brian Goldbloom and are site-specific. The "millstone" art at the northern entrance references both a previous mill building on the site and the city's early prosperity in the milling industry; the integrated station shelter "tree" columns reference the city's strong connection to lumber milling; and the carved streambed and waterfall at the southern entrance references the community's natural areas and the station's proximity to Kellogg Lake. TriMet has convened a Public Art Advisory Committee (PAAC) as part of the Portland Milwaukie Light Rail project. The PAAC is a citizen committee charged with artist selection and final review and approval of all art concepts along the alignment. It has representatives from along the entire alignment including several from the Milwaukie and Oak Grove areas. *The proposal meets this guideline.*

PEDESTRIAN EMPHASIS GUIDELINES	
Applicant Information	**Recommended Findings**
a. Reinforce and Enhance the Pedestrian System = Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.	
The station area preserves existing pedestrian paths, and creates a number of additional and well-defined new paths. The sidewalk along SE 21st will be widened to 16' to improve circulation. Pedestrian scaled lighting will be introduced. There are specifically introduced guardrails and signal control devices designed to guide pedestrian movement, protecting the pedestrian from grade changes and allowing track crossings at appropriate and safe locations. These features combine to enhance the focus on the	As proposed, the light rail station does not introduce any new barriers to pedestrian movement. As conceptualized in the South Downtown Concept Plan, pedestrian access to the north entrance is via a crescent shaped sidewalk connecting 21st Ave and Adams St to the station. While this route is somewhat indirect, the shape and location of the access walk is necessitated by the need to guide pedestrians safely across three sets of tracks. Pedestrians are guided across the tracks via a system of ornamental railings, textured

pedestrian as the priority. A universal primary access is provided at the north end of the station, which provides direction connections to the Bus transfers at 21st and Washington, as well as the adjacent high school, businesses, and new and existing pedestrian amenities along the streets. In addition, Stairs from Lake Road are used to overcome significant grade differences, to introduce a secondary pedestrian pathway to the station. Guard and hand Rails throughout the project area are designed in a manner that provides paths and visual cues to move them safely and efficiently about the site. All associated elements maintain a high degree of quality and craftsmanship. These areas are well lit and avoid obstructions, further prioritizing the pedestrian. Overall, the project results in a well-defined visual attraction that will enhance the pedestrian experience. The guideline is met.	pavement, landscaping, and visual cues. Stairs at the south end of the station overcome significant grade differences and introduce a secondary pedestrian pathway to the station from Lake Rd and 21st Ave. As proposed, the pedestrian experience is enhanced by the introduction of new pedestrian pathways between Lake Rd and 21st Ave and the station, and the provision of a safe route to the north end of the station. *The proposal meets this guideline.*
b. Define the Pedestrian Environment = Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.	
The station platform and shelters are modest in scale. The shelters, paving materials, wall materials, guardrail designs, landscaping, plazas, and associated furniture all contribute to the variety and richness of the area. Along Lake Road, the masonry abutment walls are patterned to a pedestrian scale. Highly detailed and integrated stair and rails enhance this portion of the public realm. The views to and from the cantilevered platform access further add to the richness and enhancement of the public realm. This guideline is met.	As proposed, the light rail station introduces human-scaled design treatments where the station intersects with the pedestrian environment. • The station structures are modest in scale. The overall quality of design including detailing of the paving materials and wall materials; the use of ornamental railings to guide pedestrians to the station and platform; and landscaping throughout the site enhance the pedestrian experience. • The southern stair access incorporates public art, textured wall surfaces, street-level plantings, ornamental railings, terraced stormwater facilities, weathering steel finishes, and traditional-style lights. The quality of the design and the progression and layering of the elements (landscaping, railings, light fixtures) along the stairs add variety and richness to the pedestrian experience. • The proposed jump span lighting provides visual interest and uniform lighting of the area beneath the jump span. The lighting design provides for a comfortable,

	attractive, and safe pedestrian environment. *The proposal meets this guideline.*
c. Protect the Pedestrian from the Elements = Protect pedestrians from wind, sun, and rain.	
The station shelter designs provide windscreens with integrated benches, and a widened roof to protect pedestrians from wind and rain. The glass roof is coated for UV protection from the sun. TVM shelters are also provided as shelter for patrons while purchasing fare. The guideline is met.	As proposed, the light rail station contains several structures designed to protect passengers from the elements: the station platform, bike shelter, and TVM shelters. The platform shelter provides windscreens, integrated benches, and UV coating of the roof for protection from the sun. The bike shelter provides a sheltered area to lock up a bike. The TVMs on site include glass overhangs to protect passengers while purchasing their fares. *The proposal meets this guideline.*
d. Provide Places for Stopping and Viewing = Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other, and otherwise enjoy the downtown surroundings.	
The station and TVM shelters will provide places to gather sheltered from the weather, and the station platform includes benches. Additional city standard benches are provided on Adams near the proposed bike locker amenities. The introduction of plazas around the station area will provide places to meet as well. The integrated art areas will certainly become landmarks for meeting up with others, as well as an opportunity to enjoy the art in its own right. The guideline is met.	As proposed, the light rail station contains two spaces that are open to the public (e.g. are not restricted to paying passengers): the cantilevered platform access and the bike plaza. The cantilevered platform access provides a unique view of Kellogg Lake, Dogwood Park, and the Willamette River. Passengers and members of the public can view the natural areas to the south, as well as the public art at this location. The bike plaza provides bicycle parking and pedestrian access to the station from the north. A prominent public art piece is located in the plaza. Seating is provided to provide comfortable places for the public to view the public art, meet passengers disembarking, or watch people go by. *As conditioned, the proposal meets this guideline.*
e. Create Successful Outdoor Spaces = Spaces should be designed for a variety of activities during all hours and seasons.	
The variety and placement of plazas, and the additional gathering areas such as the cantilevered platform access and the station area, results in a flexible layering of spaces that will support various uses during all	As proposed, the light rail station includes a bike plaza that is open to the public, includes easily accessible covered bicycle parking, large-scale public art, and seating. A sense of enclosure is provided by the textured concrete

hours and all seasons. Art and plaza spaces will provide energy and interest along new paths at all hours. Landscaped areas will change with the seasons. The guideline is met.	retaining wall and railings on the west side and street trees on the east side. The plaza is small in scale, and the textured surface of the pre-cast concrete retaining wall is appropriately human-scaled. The plaza is visible from both the street level and from the elevated platform area, is designed for year-round use, and is accessible at all hours. *The proposal meets this guideline.*
f. Integrate Barrier-Free Design = Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards.	
Tri Met consistently includes exceptional barrier free design in all of its projects. The station is a part of a region wide accessible transportation network, and all elements associated with the project will exceed minimum standards, both technically and aesthetically. The station area provides level boarding for all patrons, and a primary access point that is universal and connects directly to the proposed on-street LIFT space, bus stops at SE 21st and Washington, and existing sidewalk and street networks. While the north end is a stairway, a ramp option was not deemed viable at this location. Given the significant grade changes at the south end of the platform, a ramped access would result in a longer path of travel for patrons, than if they went to the primary access at the north. The TVM landing and connections between the proposed and future platforms provide level access in anticipation of the ADA access from the future building development. In addition, TriMet has vetted the design with the Citizens for Accessible Transportation Committee, a vital resource for determining appropriate accessible station design throughout the Light Rail system. This guideline is met.	ADA access to the light rail station is provided by an at-grade access at the north end of the platform. The access point connects directly to the on-street LIFT space, but stops at SE 21st and Washington, and existing sidewalk and street network. Access from the south is via stairway. Given the significant grade changes at the south end of the platform, TriMet determined that a ramped access would result in a longer path of travel for passengers than accessing the primary access via 21st Ave. Additionally, use of a ramp at this location would preclude future development of a building on the site.The southern stair access is a key feature of the station design, and a ramp at this location would be unnecessary and inappropriate. *The proposal meets this guideline.*

ARCHITECTURE GUIDELINES	
Applicant Information	**Recommended Findings**

a. Corner Doors = Locate entry doors on corners of commercial and retail buildings wherever possible.	
No doors are proposed as part of the station application.	*This guideline is not applicable.*
b. Retail and Commercial Doors = Doors should create an open and inviting atmosphere.	
No doors are proposed as part of the station application.	*This guideline is not applicable.*
c. Residential Doors = Residential front doors should define a friendly transition between the public and the private realm.	
No doors are proposed as part of the station application.	*This guideline is not applicable.*
d. Wall Materials = Use materials that create a sense of permanence.	
TriMet consistently applies the use of long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, bead blasted stainless steel, glass, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. The guideline is met.	As proposed, the abutment walls on Lake Rd, the safety walls to the west of the tracks, and the retaining walls on site are made of concrete and textured with a formliner that resembles a rusticated masonry surface. The textured surface provides depth and substance. *The proposal meets this guideline.*
e. Wall Structure = Use scale defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.	
Shelter structures are highly detailed and articulated, in order to provide comfortable protection and define gathering areas in a way that is pedestrian scaled and finished. Landscape, art, a bike shelter, and street trees, further reinforce the street edge. Although, this guideline applies exclusively to buildings, the guideline is met to the extent applicable.	As proposed, the abutment wall on the north side of Lake Rd is made of pre-cast concrete and textured with a formliner that resembles a rusticated masonry surface; the textured surface creates a unified appearance and visual interest at the pedestrian level. The textured wall surfaces have the appearance of stacked ashlar stone with formliner seams hidden as much as possible, and individual stone dimensions that are proportionally appropriate for the wall surface areas and the pedestrian environment. The wall is articulated and light in color throughout the pedestrian; the exposed smooth concrete at the base of the wall is softened by stormwater plantings.

	The proposal meets this guideline.
f. Retail Windows =Use windows that create an open and inviting atmosphere.	
No retail windows are proposed as part of the station application.	*This guideline is not applicable.*
g. Residential Bay Windows =Provide bays to add variety and visual interest to façade and interesting views and outdoor spaces from the interiors.	
No residential bay windows are proposed as part of the station application.	*This guideline is not applicable.*
h. Silhouette and Roofline = Create interest and detail in silhouette and roofline.	
The rooflines of the shelters will be enhanced both by their form, and by their modulated and fine-scaled detail, whether viewed from across the site, or from down below. The roof material is glass, with structural steel roof supports painted black. The black color allows the structure to recede, yet the transparency of the glass allows the materials to visibly accentuate the roofline. These elements will be further enhanced by the more subtle play of light and shadow and color that will result from the contrast in color and texture This guideline is met.	As proposed, the shelter structures on the site provide the main vertical element of the light rail station both structurally and visually. All of the shelters have glass roofs, with structural steel roof supports. The roof supports of the platform and TVM shelter will be painted "Milwaukie black." The platform shelter has a pitched roof, which relates to traditional train station design. The other shelters have cantilevered glass roofs, which are more contemporary and contrast with the platform shelter. Overall, the variety of silhouettes created a unified, interesting design. *The proposal meets this guideline.*
i. Rooftops = Integrate rooftop elements into building design.	
No rooftops are proposed as part of the station application.	*This guideline is not applicable.*
j. Green Architecture = New construction or building renovation should include sustainable materials and design.	
TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, glass, painted metal and Stainless steel have been designed and detailed in a manner that will ensure that the structures are sustainable with low life cycle costs. The steel elements, as well as the concrete, will include recycled content, and have been structurally designed to be as efficient as possible. LED lights are being utilized for the jump-span lighting, and platform lighting, to provide high efficiency lighting throughout the project.	As proposed, the light rail station will be constructed of quality, durable materials with low lifecycle costs. The steel elements, as well as the concrete, include recycled content, and have been structurally designed to be as efficient as possible. High-efficiency LED lighting will be utilized for platform and jump span lighting. Finally, a majority of the materials are potentially recyclable should the project ever have an end-of-use. *The proposal meets this guideline.*

Finally, a majority of the materials are potentially recyclable – most readily the predominant use of steel – should the project ever have an end-of-use. The guideline is met.	
k. Building Security = Buildings and site planning should consider and employ techniques that create a safe environment.	
Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. TriMet has included intrusion detection on the bridge adjacent the platform, to deter trespass, and will install security cameras on the platforms for added security. In addition, lighting has been provided that exceed safety standards and maintain uniformity on the platform. Signage, signals, and railings have been included in the design, with the track crossing circulation oriented toward the direction of train travel to where possible, so patrons can see and acknowledge oncoming trains. The station platform has been cited to ensure safe train operations for adjacent track crossings at the street level. This guideline is met.	As proposed, the light rail station employs numerous techniques to create a safe environment for passengers. • Intrusion detection devices on the bridge deter trespassers and CCTV surveillance on the platform deters crime. • Pedestrians are guided from 21st Ave to Adams St to the station platform via a crescent shaped sidewalk and a system of guard rails, textured paving, and landscaping. • The on-site lighting illuminates the station platform and access points at sufficiently high levels for safe pedestrian travel. • The area underneath the jump span at Lake Rd includes lighting at sufficiently high enough levels for safe vehicular and pedestrian travel. • The proposed plant materials and landscaping design ensure that the site is easily observable and increases passenger safety. *The proposal meets this guideline.*
l. Parking Structures = Parking structures should be designed so that they appear like most other buildings in the downtown.	
No parking structures are proposed as part of the station application.	*This guideline is not applicable.*

LIGHTING GUIDELINES	
Applicant Information	**Recommended Findings**
a. Exterior Building Lighting = Architectural lighting should be an integral component of the façade composition.	
This guideline is intended to apply typically to buildings when implementing an architectural lighting plan. The architectural lighting the station is limited to lighting	As proposed, the area underneath the jump span at Lake Rd includes 24 Winona LED linear light fixtures recessed within the concrete of the jump span; 16 Winona LED

integrated into the design of the shelters. There is street and platform lighting placed about the overall station area that has been selected and composed to integrate into overall context. The lighting under and about the jump span has been further refined in response to the DLC's guidance and associated Condition of Approval, resulting in a highly-integrated approach that will contribute to the quality and safety of this evolved lighting approach. The guideline is met.	linear light fixtures mounted above the abutment wall and piers; and 2 Winona LED linear light fixtures mounted behind the piers. The applicant's photometric studies indicate that the fixtures would light this area to an average level of 3.05 foot candles. The recessed fixtures would be placed in a randomized pattern to provide visual interest, and would wash the concrete wall and column surfaces, creating both a visually interesting and safe pedestrian experience. As proposed, the platform shelter will be illuminated with integrated LED lighting. The internal illumination will highlight the shelter design and will create an outline effect to add visual interest to the shelter in nighttime conditions. *The proposal meets this guideline.*
b. Parking Lot Lighting = Ornamental street lights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.	
No parking lots are proposed as part of the station application.	*This guideline is not applicable.*
c. Landscape Lighting = Lighting should be used to highlight sidewalks, street trees, and other landscape features. Landscape lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.	
The sidewalks and other pedestrian routes have lighting placed to maximize visibility and exceed safety standards, while minimizing glare. In response to the DLC's guidance and associated Condition of Approval, particular attention has been paid to developing a lighting program under and around the jump span the lights the sidewalks evenly and effectively. Lights along the stairs from Lake Road are sensitively integrated to enhance the safety and experience of that important path. Lighting is also included to accentuate the art pieces. Together, these lighting amenities highlight the station area and provide safe, uniform lighting for the site. The guideline is met.	As proposed, the light rail station is illuminated by a combination of platform lighting, lighting on the cantilevered platform access, and lighting at the southern pedestrian access to Lake Rd and 21st Ave. Off-platform lighting is located on the cantilevered platform access, on the south stair entrance, and on the pedestrian connection between the stairs and 21st Ave. The ornamental light fixtures meet Milwaukie's streetscape design standards to provide continuity between the site and the adjacent streetscape. In-grade LED lighting is proposed to accent the "mill stone" sculpture in the bike plaza. *The proposal meets this guideline.*

d. Sign Lighting = Sign lighting should be designed as an integral component of the building and sign composition.	
Signs on site are to be directional and informative in nature, and modest in scale. They are not to be interiorly lit, as they are too small to warrant integrated lighting. However station signs are located on Light poles and placed to be adequately illuminated by the ambient light resulting from pole-mounted fixtures above. The signs themselves are carefully placed and mounted to be both legible by patrons on the platforms as well as trains, and well integrated with the various elements to which they are attached. The digital displays are internally lit by definition, and are well integrated into the respective shelter design. The guideline is met.	No sign lighting is proposed as part of the light rail station application. *This guideline is not applicable.*

SIGN GUIDELINES	
Applicant Information	**Recommended Findings**
a. Wall Signs	
Signs on site are to be directional and informative in nature, and modest in scale. The signs are carefully placed and mounted to be both legible, and well integrated with the various elements to which they are attached. The digital displays are well integrated into the respective shelter design. The guideline is met.	No wall signs are proposed as part of the light rail station application. *This guideline is not applicable.*
b. Hanging or Projecting Signs	
Station signage is oriented both toward platform entrances and the approaching trains, as well toward a train stopped at the platform for easy station identification. All are easily visible and highly recognized as part of the Light Rail system. The guideline is met.	No hanging or projecting signs are proposed as part of the light rail station application. *This guideline is not applicable.*
c. Window Signs	
No window signs are proposed as part of the station application.	*This guideline is not applicable.*

d. Awning Signs	
No awning signs are proposed as part of the station application.	*This guideline is not applicable.*
e. Information and Guide Signs	
Signs on site are to be directional and informative in nature, modest in scale, and placed in a visually logic order to guide passengers. They are scaled to be no larger than necessary, but appropriately legible, and consistent with station signage throughout the light rail system. The guideline is met.	As proposed, light rail station signs are one of the "elements of consistency" throughout the alignment. They are attached to light poles that are located at regular intervals along the platform, and affixed to the shelter to indicate the station name. The signs are small scale, of consistent dimensions, and located in a visually logical order. *The proposal meets this guideline.*
f. Kiosks and Monument Signs	
No kiosk or monument signs are proposed as part of the station application.	*This guideline is not applicable.*
g. Temporary Signs	
No temporary signs are proposed as part of the station application.	*This guideline is not applicable.*

C. Submittal of a complete application and applicable fee as adopted by the City Council.

The applicant submitted the application and applicable a revised application on April 26, 2012, and requested that the City deem the application complete. The applicable design review application fee was submitted March 27, 2012.

The DLC recommends finding that this approval criterion has been met.

Recommended Conditions of Approval

Staff has prepared the following Conditions of Approval for the Milwaukie Design and Landmarks Committee's review of application DR-12-04. Following the Design and Landmarks Committee (DLC) review of the proposal, the DLC's recommended conditions of approval will be incorporated into the staff report to the Planning Commission for the public hearing on this proposal. Conditions of approval for other aspects of the project (e.g., CSU review) are not relevant to the DLC's review of the proposal and therefore are not included in this document.

1. The plans submitted to the City of Milwaukie for construction of the Portland Milwaukie Light Rail station ("station") shall be in substantial conformance with the plans reviewed by the DLC and Planning Commission (PC) and date stamped by the City on April 26, 2012. The plans shall be modified only as described in these conditions of approval or through a subsequent design review or formal modification process.

   (Note: Any plan set changes proposed by the applicant, DLC, or Planning Commission during or as a result of the design review process shall be reflected in these conditions of approval prior to adoption by the Planning Commission.)

2. The applicant shall provide a detailed description of any proposed plan changes that are not part of these conditions of approval, or that the final decision-making authority did not specify in its decision; such plan change shall be subject to the City's review and approval.

3. Prior to approval of development permits for the Downtown Milwaukie Light Rail Station, the Planning Director shall review the plans for consistency with the following specific conditions of approval:

   A. Stormwater faciltiies

      i. The stormwater facility is designed to accommodate stormwater from the Kellogg Bridge, station area, and future station building. Confirm that all uses fit on the site.

   B. Seating areas

      i. Provide seating opportunities in the bike plaza. Seating shall provide for viewing of the streetscape, sitting and resting, visiting, viewing the public art, or otherwise enjoying the downtown surroundings. The location and specifications of the seating shall comply with the "Provide Places for Stopping and Viewing" design guideline.

4. Pursuant to Subsection 19.1001.7.E.2, the time period within which the applicant must obtain development permits for the light rail station is 2 years, and the time period within which the applicant must pass all final inspections is 4 years, from the date of the land use decision on this application.

DESIGN REVIEW

The site is located in the Downtown Office zone and is subject to Downtown Design Review. Addressed below are the following:

- **The applicable approval criteria of MMC 10.907.7**
- **The Condition of Approval from the preceding Design Review intended to be addressed at this time.**
- **The applicable Design Guidelines.**

19.907.7 Approval Criteria for Design Review		
Criteria		**Findings**
A. Compliance with Title 19;		The applications requirements and development standards of Title 19 have been met, but for the required variances addressed above. With approval of the variances, the criterion is therefore met.
B. Substantial consistency with the Downtown Design Guidelines;		The project has been reviewed below, and has been found to be consistent with the applicable Downtown Design Guidelines The criterion is met.
C. Submittal of a complete application and applicable fee as adopted by the City Council.		The project has been reviewed for completeness; missing items have been identified, and are herein addressed. The criterion is met.

Condition of Approval from WG 11-11-01 (Previous Design Review		
Criteria		**Findings**
A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.		More detailed information about the design of the jump span, the lighting approaches, and the anticipated lighting results, have been provided (Exhibits P5, P6). The result is a well-integrated approach that results in a comfortable, attractive, and safe pedestrian environment.
B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.		More detailed information about the specific light fixtures, and the anticipated lighting results, have been provided (Exhibits P5, P6). The result is a well-integrated approach that enhances the proposed wall treatments and results in a comfortable, attractive, and safe pedestrian environment. This portion of the Condition is therefore met.

C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.		New light fixtures have been identified and proposed that are well-suited for the environment, compliment the proposed wall treatments, and results in a comfortable, attractive, and safe pedestrian environment. This portion of the Condition is therefore met.
D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions: • Uniform lighting of the sidewalk • Minimal glare • Minimal deep shadows beneath the structure		Illustrations and analysis (Exhibits P5, P6) have been provided that demonstrate the new lighting approach and its success in achieving: uniform sidewalk lighting, minimized glare, and minimal deep shadows beneath the structure. This portion of the Condition is therefore met.
E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.		The most efficient fixtures available that meet the other lighting goals of the Condition have been selected and proposed. A memo is provided as Exhibit P19 more fully addressing each component of this condition. This portion of the Condition is therefore met.

DESIGN GUIDELINES: MILWAUKIE CHARACTER		
Guideline		**Findings**
Reinforce Milwaukie's Sense of Place **Strengthen the qualities and characteristics that make Milwaukie a unique place.**		Milwaukie's history is largely formed and defined by its natural surroundings and unique transportation systems. The project's parallel relationship to the existing rail trestle reinforces this transportation/technological history. Light rail is the steamship of the 21st century, and will provide Milwaukie with a new link to the region. It will provide unique views to the natural and urban areas that are Milwaukie today and will reinforce Milwaukie's qualities and characteristics in the future. As a result of public participation efforts, including public workshops, meetings with officials, and input from the Design and Landmarks Committee, numerous elements have been integrated into the design of the station that are specifically responsive to Milwaukie's unique qualities and characteristics. These elements include: stone-patterning of the various wall treatments (including those adjacent to the future platform), bollard and furniture treatments appropriate to Milwaukie's palette, pedestrian scale street light standards consistent with Milwaukie's current pattern, custom rail treatments incorporating detail, complimentary landscape design, and motifs specific to Milwaukie. The guideline is met.
Integrate the Environment **Building design should build upon environmental assets.**		The design of the station area, respects the character of the nearby natural area through simple detailing, material selection, and landscaped areas. The cantilevered platform access to the south will afford unique views to the environmental assets of Kellogg Lake and Kronberg Park, as well as to the Willamette River and hills beyond. Removal of invasive plants currently on the vacant site, and landscaping with appropriate replacements, will further enhance the immediate environmental quality. The inclusion of a water quality facility, where art is used to both highlight and celebrate stormwater, raises awareness of water quality at Kellogg Lake, south of the station, and the Willamette River to the west. The art is reflective of a waterfall and natural streambed. In addition, access and circulation patterns to the station facilitate enhanced pedestrian connections to existing parks and natural areas. Though the station does not consist of, or include, a building, the guideline is met.

Promote Linkages to Horticultural Heritage **Celebrate Milwaukie's heritage of beautiful green spaces.**		The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.
Establish or Strengthen Gateways **Projects should use arches, pylons, arbors or other transitions to mark special or primary entries and/or borders between public and private spaces.**		The carefully designed station platform is accentuated on all sides by railings with openings at designated safe entry points. The 42" high metal railings with historic Milwaukie motif demarcate the site and guide users to designated entry points. These access points are marked by small glass roofed shelters that house the Ticket vending machines. Signage and inlaid bronze lettering at the base of the ramps to the platform further delineate the threshold to the station area. The cantilevered platform access also serves as a promontory, connecting the station visually to public and private spaces beyond. The stone-patterned abutment walls, patterned masonry, landscaped plazas, unique Milwaukie-specific ornamental handrails, street enhancements, and public art; all serve to transition gracefully between the public station area and the surrounding private areas and properties. The guideline is met.

Consider View Opportunities **Building designs should maximize views of natural features or public spaces.**		The station platform and platform access will result in new and very different viewpoints of Kellogg Lake, Kronberg Park, and views to the river and Greenway beyond, for the many passengers riding it each day. The plazas include seating, which allows viewing from, and between, these new public spaces. Though the project does not include building design, to the extent it is applicable, the guideline is met.

Use Architectural Contrast Wisely **Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area and clarify how the downtown is organized.**		The use of Milwaukie Black is proposed on all street elements and railings. However certain elements of the station shelters and the light poles are proposed as a bead blasted stainless steel. While this aligns with TriMet standards, the design offers an interesting contrast to the black to accentuate the platform area. When combined with the glass roof of the shelters, artwork, and railing design, the platform becomes a distinctive community amenity that is still easily recognized as part of the Light rail system. The simple detailing of the abutment wall, landscape plantings, and stairs along Lake Road add dramatic elements that will pronounce permanence and welcoming appropriate to this significant public work. The small public plazas - with associated landscaping, surface treatments, and furniture – will further serve to define the site as a public amenity, while providing a graceful transition between the neighborhood and the platform area. The south platform access, serving as a promontory overlooking Kellogg Lake and Kronberg Park, will further pronounce the station's public purpose in a dramatic-yet-integrated manner. The guideline is met.
Integrate Art **Public art should be used sparingly. It should not overwhelm outdoor spaces or render building mere backdrops. When used, public art should be integrated into the design of the building or public open space.**		TriMet's public art program installs a variety of artwork at locations along its light rail lines. The art is developed to be sensitively integrated, and specifically respectful of this guideline. The art has been vetted through the Public Art Advisory Committee, with input from the committed Milwaukie public and respective City Commissions in order to ensure the result is appropriate and contributory. The station art consists of two "milling wheels" at the north end near the bike shelters, carved "tree" columns under the station shelter, and a carved streambed and waterfall at the south end, included as part of the storm water treatment landscaping. These respective art elements are highly specific to the site, tied thematically to Milwaukie heritage. To the extent this guideline is applicable, it is met.

DESIGN GUIDELINES: PEDESTRIAN EMPHASIS		
Guideline		**Findings**
Reinforce and Enhance the Pedestrian System **Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.**		The station area preserves existing pedestrian paths, and creates a number of additional and well-defined new paths. The sidewalk along SE 21st will be widened to 16' to improve circulation. Pedestrian scaled lighting will be introduced. There are specifically introduced guardrails and signal control devices designed to guide pedestrian movement, protecting the pedestrian from grade changes and allowing track crossings at appropriate and safe locations. These features combine to enhance the focus on the pedestrian as the priority. A universal primary access is provided at the north end of the station, which provides direction connections to the Bus transfers at 21rst and Washington, as well as the adjacent high school, businesses, and new and existing pedestrian amenities along the streets. In addition, Stairs from Lake Road are used to overcome significant grade differences, to introduce a secondary pedestrian pathway to the station. Guard and hand Rails throughout the project area are designed in a manner that provides paths and visual cues to move them safely and efficiently about the site. All associated elements maintain a high degree of quality and craftsmanship. These areas are well lit and avoid obstructions, further prioritizing the pedestrian. Overall, the project results in a well-defined visual attraction that will enhance the pedestrian experience. The guideline is met.
Define the Pedestrian Environment **Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.**		The station platform and shelters are modest in scale. The shelters, paving materials, wall materials, guardrail designs, landscaping, plazas, and associated furniture all contribute to the variety and richness of the area. Along Lake Road, the masonry abutment walls are patterned to a pedestrian scale. Highly detailed and integrated stair and rails enhance this portion of the public realm. The views to and from the cantilevered platform access further add to the richness and enhancement of the

		public realm. This guideline is met.
Protect the Pedestrian from the Elements **Protect pedestrians from wind, sun and rain.**		The station shelter designs provide windscreens with integrated benches, and a widened roof to protect pedestrians from wind and rain. The glass roof is coated for UV protection from the sun. TVM shelters are also provided as shelter for patrons while purchasing fare. The guideline is met.
Provide Places for Stopping and Viewing **Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other, and otherwise enjoy the downtown surroundings.**		The station and TVM shelters will provide places to gather sheltered from the weather, and the station platform includes benches. Additional city standard benches are provided on Adams near the proposed bike locker amenities. The introduction of plazas around the station area will provide places to meet as well. The integrated art areas will certainly become landmarks for meeting up with others, as well as an opportunity to enjoy the art in its own right. The guideline is met.
Create Successful Outdoor Spaces **Spaces should be designed for a variety of activities during all hours and seasons.**		The variety and placement of plazas, and the additional gathering areas such as the cantilevered platform access and the station area, results in a flexible layering of spaces that will support various uses during all hours and all seasons. Art and plaza spaces will provide energy and interest along new paths at all hours. Landscaped areas will change with the seasons. The guideline is met.
Integrate Barrier-free Design **Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards.**		Tri Met consistently includes exceptional barrier free design in all of its projects. The station is a part of a region wide accessible transportation network, and all elements associated with the project will exceed minimum standards, both technically and aesthetically. The station area provides level boarding for all patrons, and a primary access point that is universal and connects directly to the proposed on-street LIFT space, bus stops at SE 21rst and Washington, and existing sidewalk and street networks. While the north end is a stairway, a ramp option was not deemed viable at this location. Given the significant grade changes at the south end of the platform, a ramped access would result in a longer path of travel for patrons, than if they went to the primary access at the north. The TVM landing and

		connections between the proposed and future platforms provide level access in anticipation of the ADA access from the future building development. In addition, TriMet has vetted the design with the Citizens for Accessible Transportation Committee, a vital resource for determining appropriate accessible station design throughout the Light Rail system. This guideline is met.

DESIGN GUIDELINES: ARCHITECTURE		
Guideline		**Comments**
Wall Materials **Use materials that create a sense of permanence.**		TriMet consistently applies the use of long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, bead blasted stainless steel, glass, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. The guideline is met.
Wall Structure **Use scale-defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.**		Shelter structures are highly detailed and articulated, in order to provide comfortable protection and define gathering areas in a way that is pedestrian scaled and finished. Landscape, art, a bike shelter, and street trees, further reinforce the street edge. Although, this guideline applies exclusively to buildings, the guideline is met to the extent applicable.
Silhouette and Roofline **Create interest and detail in silhouette and roofline.**		The rooflines of the shelters will be enhanced both by their form, and by their modulated and fine-scaled detail, whether viewed from across the site, or from down below. The roof material is glass, with structural steel roof supports painted black. The black color allows the structure to recede, yet the transparency of the glass allows the materials to visibly accentuate the roofline. These elements will be further enhanced by the more subtle play of light and shadow and color that will result from the contrast in color and texture This guideline is met.

Green Architecture **New construction or building renovation should include sustainable materials and design.**		TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, glass, painted metal and Stainless steel have been designed and detailed in a manner that will ensure that the structures are sustainable with low life cycle costs. The steel elements, as well as the concrete, will include recycled content, and have been structurally designed to be as efficient as possible. LED lights are being utilized for the jump-span lighting, and platform lighting, to provide high efficiency lighting throughout the project. Finally, a majority of the materials are potentially recyclable – most readily the predominant use of steel – should the project ever have an end-of-use. The guideline is met.
Building Security **Buildings and site planning should consider and employ techniques that create a safe environment.**		Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. TriMet has included intrusion detection on the bridge adjacent the platform, to deter trespass, and will install security cameras on the platforms for added security. In addition, lighting has been provided that exceed safety standards and maintain uniformity on the platform. Signage, signals, and railings have been included in the design, with the track crossing circulation oriented toward the direction of train travel to where possible, so patrons can see and acknowledge oncoming trains. The station platform has been cited to ensure safe train operations for adjacent track crossings at the street level. This guideline is met.

DESIGN GUIDELINES: LIGHTING		
Guideline		**Findings**
Exterior Building Lighting **Architectural lighting should be an integral component of the facade composition.**		This guideline is intended to apply typically to buildings when implementing an architectural lighting plan. The architectural lighting the station is limited to lighting integrated into the design of the shelters. There is street and platform lighting placed about the overall station area that has been selected and composed to integrate into overall context. The lighting under and about the jump span has been further refined in response to the DLC's guidance and associated Condition of Approval, resulting in a highly-integrated approach that will contribute to the quality and safety of this evolved lighting approach. The guideline is met.
Parking Lot Lighting **Ornamental streetlights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.**		Proposed ornamental streetlights are consistent with downtown streetlight standards. The guideline is met.
Landscape Lighting **Lighting should be used to highlight sidewalks, street trees and other landscape features. Landscape lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.**		The sidewalks and other pedestrian routes have lighting placed to maximize visibility and exceed safety standards, while minimizing glare. In response to the DLC's guidance and associated Condition of Approval, particular attention has been paid to developing a lighting program under and around the jump span the lights the sidewalks evenly and effectively. Lights along the stairs from Lake Road are sensitively integrated to enhance the safety and experience of that important path. Lighting is also included to accentuate the art pieces. Together, these lighting amenities highlight the station area and provide safe, uniform lighting for the site. The guideline is met.

Sign Lighting **Sign lighting should be designed as an integral component of the building and sign composition.**		Signs on site are to be directional and informative in nature, and modest in scale. They are not to be interiorly lit, as they are too small to warrant integrated lighting. However station signs are located on Light poles and placed to be adequately illuminated by the ambient light resulting from pole-mounted fixtures above. The signs themselves are carefully placed and mounted to be both legible by patrons on the platforms as well as trains, and well integrated with the various elements to which they are attached. The digital displays are internally lit by definition, and are well integrated into the respective shelter design. The guideline is met.

DESIGN GUIDELINES: SIGNS		
Guideline		**Findings**
Wall Signs **Signs should be sized and placed so that they are compatible with the building's architectural design.**		Signs on site are to be directional and informative in nature, and modest in scale. The signs are carefully placed and mounted to be both legible, and well integrated with the various elements to which they are attached. The digital displays are well integrated into the respective shelter design. The guideline is met.
Hanging or Projecting Signs **Hanging signs should be oriented to the pedestrian, and highly visible from the sidewalk.**		Station signage is oriented both toward platform entrances and the approaching trains, as well toward a train stopped at the platform for easy station identification. All are easily visible and highly recognized as part of the Light Rail system. The guideline is met.
Information and Guide Signs **Directional signs should be small scale and of consistent dimensions, and located in a visually logical order. These signs also should provide on-site directional information.**		Signs on site are to be directional and informative in nature, modest in scale, and placed in a visually logic order to guide passengers. They are scaled to be no larger than necessary, but appropriately legible, and consistent with station signage throughout the light rail system. The guideline is met.

CONSULTING, LLC

Memo

Date: April 15, 2012

To: Li Aligood, City of Milwaukie Senior Planner

From: Jeff Joslin

Subject: Response to Condition 6 of Case No. WG-11-01, Pertaining To Jump Span Lighting Options

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Background

TriMet received final land use approval from the City of Milwaukie on January 17, 2012 for a light rail bridge over Kellogg Lake that spans between Lake Road and the planned bridge abutment on the south side of SE McLoughlin Blvd. This memo serves to satisfy Condition 6, and particularly 6E. The condition reads as follows with the relevant portion of 6E underlined:

6. The DLC requested more information and different light fixture options for lighting underneath the jump span than what was presented by the applicant at the Oct 17 DLC design review meeting. The applicant shall resubmit this design item for consideration during the land use proceedings for the Milwaukie Light Rail Station. A summary of the DLC's design direction to the applicant is as follows:
   - A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.
   - B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
   - C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
   - D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions:
     - Uniform lighting of the sidewalk
     - Minimal glare
     - Minimal deep shadows beneath the structure
   - E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.

The narrative response (key findings) is below, in response to each of the components of the Condition. Associated Exhibits (Exhibits P5A, P5B, P6, P6A, P6B, P6C, P6D,and 6E) are included in the land use application CSU 12-03 to fully describe and assess these lighting elements in response to all aspects of the condition.

Condition and Key Findings

A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.

Findings:
The proposed lighting solution utilizes linear LED luminaires mounted at intervals in recesses in the concrete slabs that span Lake Road, as well as linear LED wall-wash fixtures at perimeter walls. The solution provides an uncluttered lighting design that will provide uniform light levels under the bridge with minimal glare. Light reflected off of the adjacent walls, roadway, and sidewalks will create a glow on the ceiling of the space, creating, at night, a frame of light that reinforces the sense of gateway already established by the jump span walls, piers, and ceiling. The well-lit environment will unify the space and create a sense of safety. The pattern and texture of joints and recesses, and the interesting pattern of lights at the underside of the jump span, will create a rich visual environment, enhancing the pedestrian experience.

B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.

Findings:
The wall-wash light fixtures will provide light on the patterned walls of the concrete abutment and piers, highlighting the architectural treatment by accentuating the texture of the wall surface. The location and spacing of the fixtures is designed to cast an even light across the walls, avoiding dark areas or excessively bright areas, contributing to a comfortable and safe environment.

C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.

Findings:
The minimal dimensions of the light fixtures, and their mounting in recesses in the jump span slabs, allow the individual fixtures to recede and become part of the larger composition of textures and surfaces of the jump span elements. The pattern of parallel lighting recesses alternating with the joints between the concrete slabs of the jump span, along with the pattern

of the light fixtures themselves, creates a visual richness and variety in the ceiling of the jump span that complements the texture of the adjacent walls and is sympathetic to the pattern and character of the bridge art proposal.

D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions:

- Uniform lighting of the sidewalk

Findings:
Photometric analysis of the proposed lighting layout shows uniform light levels at the sidewalks.

- Minimal glare

Findings:
The uniform light levels shown in the photometric analysis of the proposed lighting layout will prevent the glare that can occur with contrasting light levels.

- Minimal deep shadows beneath the structure

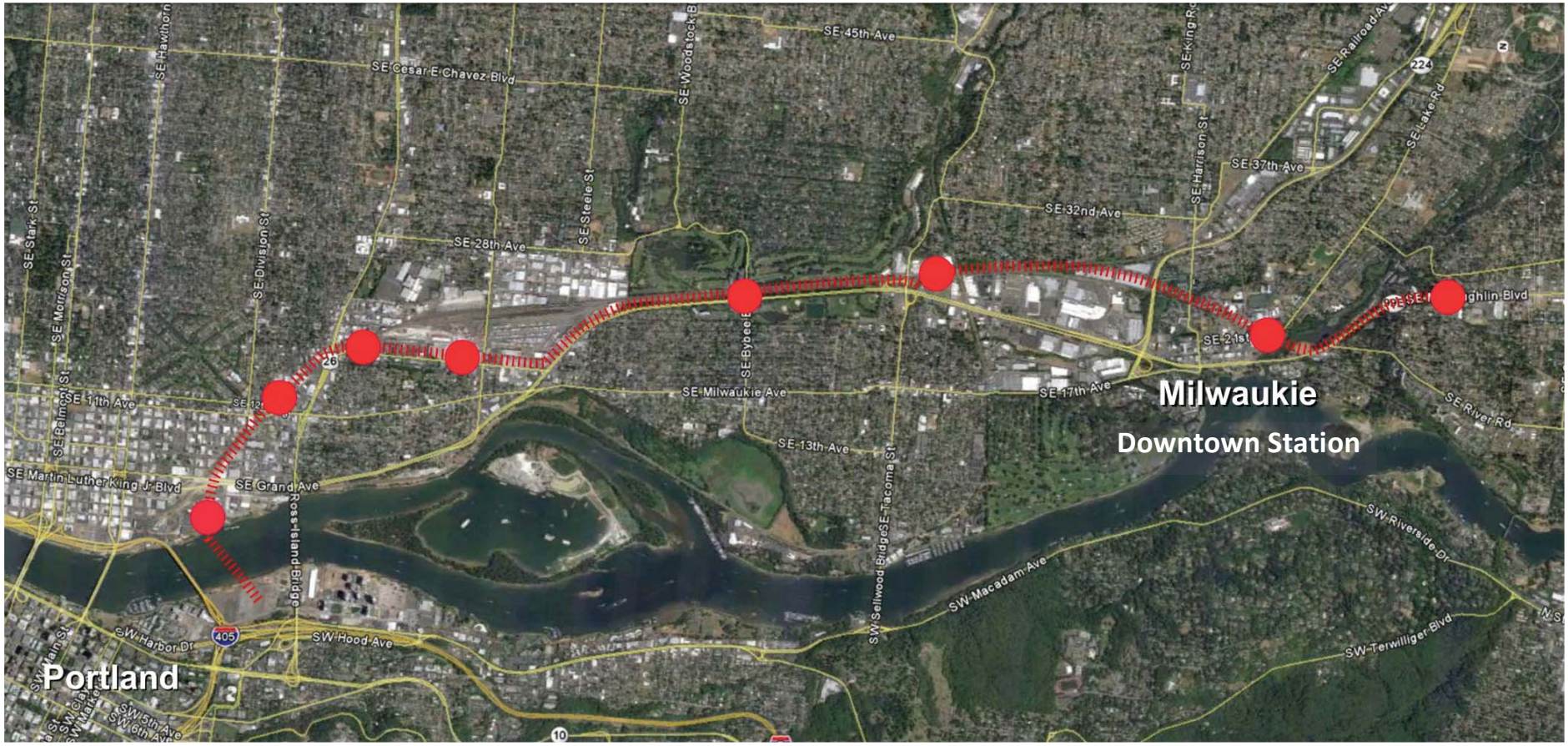
Findings:
The even light levels on roadway, sidewalk, wall, and ceiling surfaces will eliminate deep shadows.

E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.

Findings:
LED lighting fixtures are among the most efficient light fixtures currently available on the market. They are significantly more energy efficient than fluorescent fixtures when comparing equivalent light output. LED lamps last significantly longer than lamps of other lighting types, requiring minimal maintenance. Their minimal size makes them material efficient, and allows lighting solutions that enhance, without competing with, architectural and landscape spaces.

Conclusion

As the lighting elements discussed in this memo have already been vetted with the Design and Landmarks Committee and found to be appropriately response, additional detailed information has been provided, and the memo itself is here provided, Approval is requested determining compliance with Condition 6 of WG-11-01.

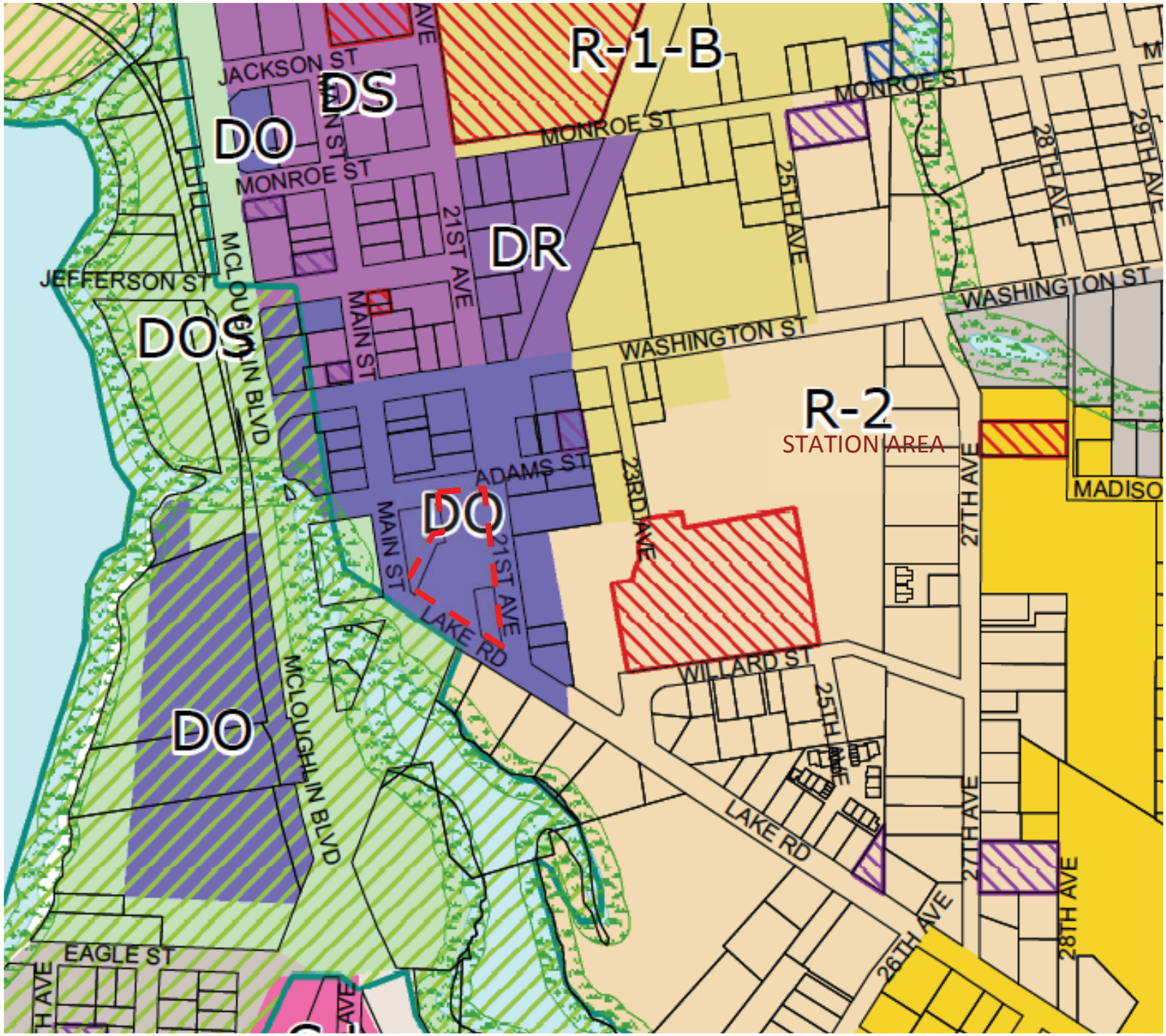


Downtown Station In Context of Overall Line

Exhibit O 1

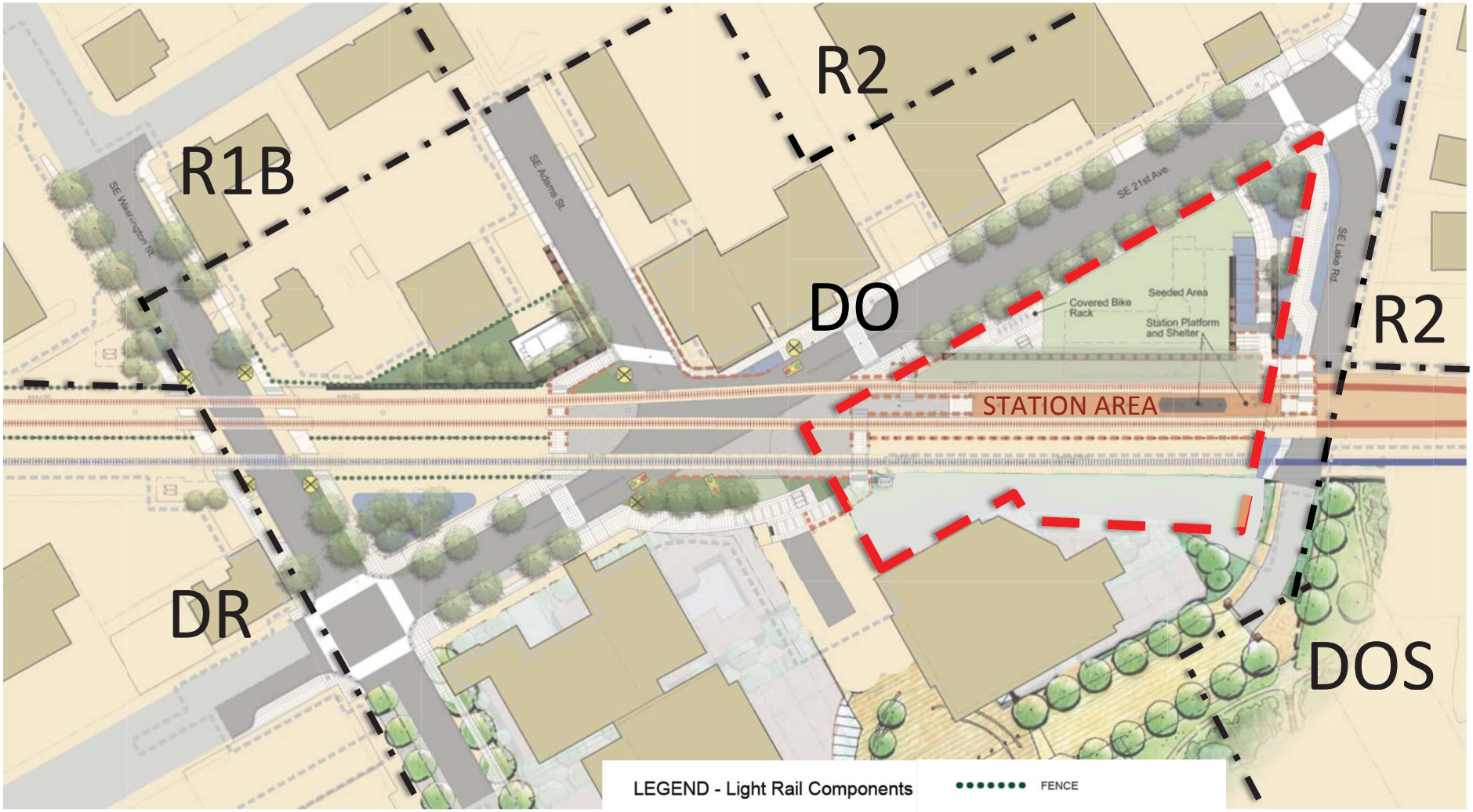
Downtown Station and Adjacent Stations

Exhibit O 2



Site Location and Downtown Zoning

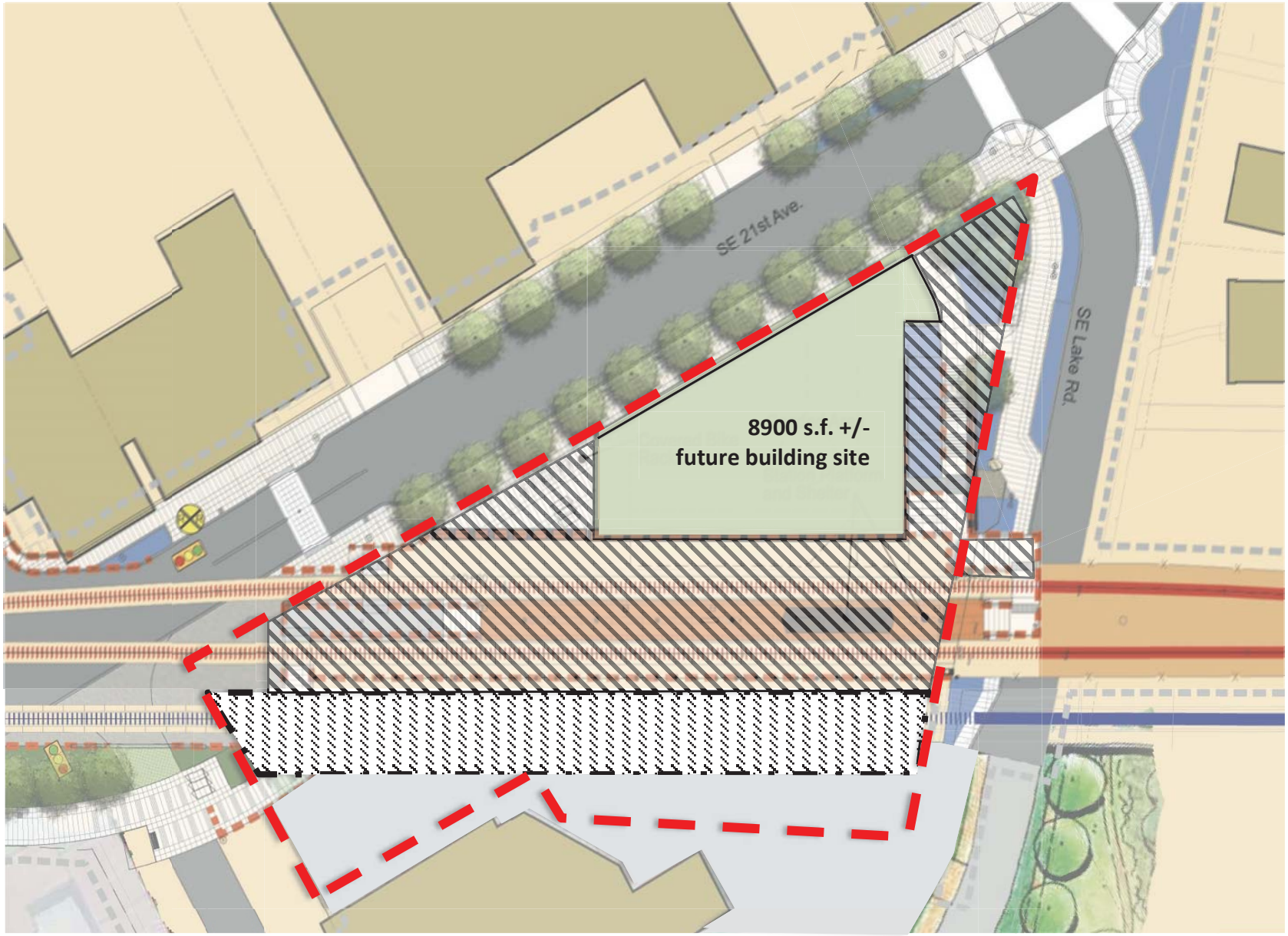
Exhibit O 3



Affected Lot Boundary

Zoning Approximations – Immediate Station Vicinity

Exhibit O 4



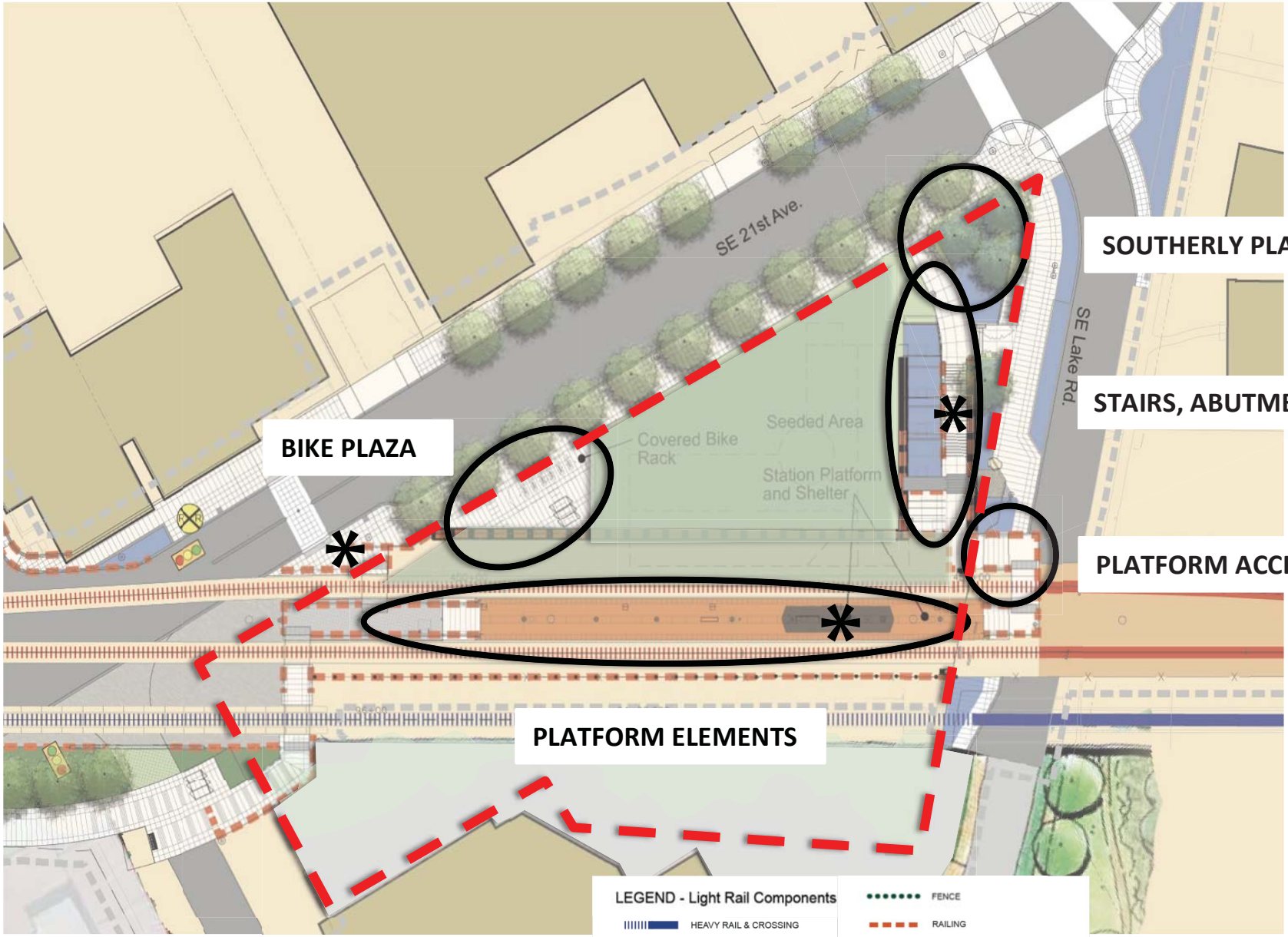
Area of Review Focus

Area of Site Within Railroad Corridor

Affected Lot Boundary

Exhibit O 5

Review Focus

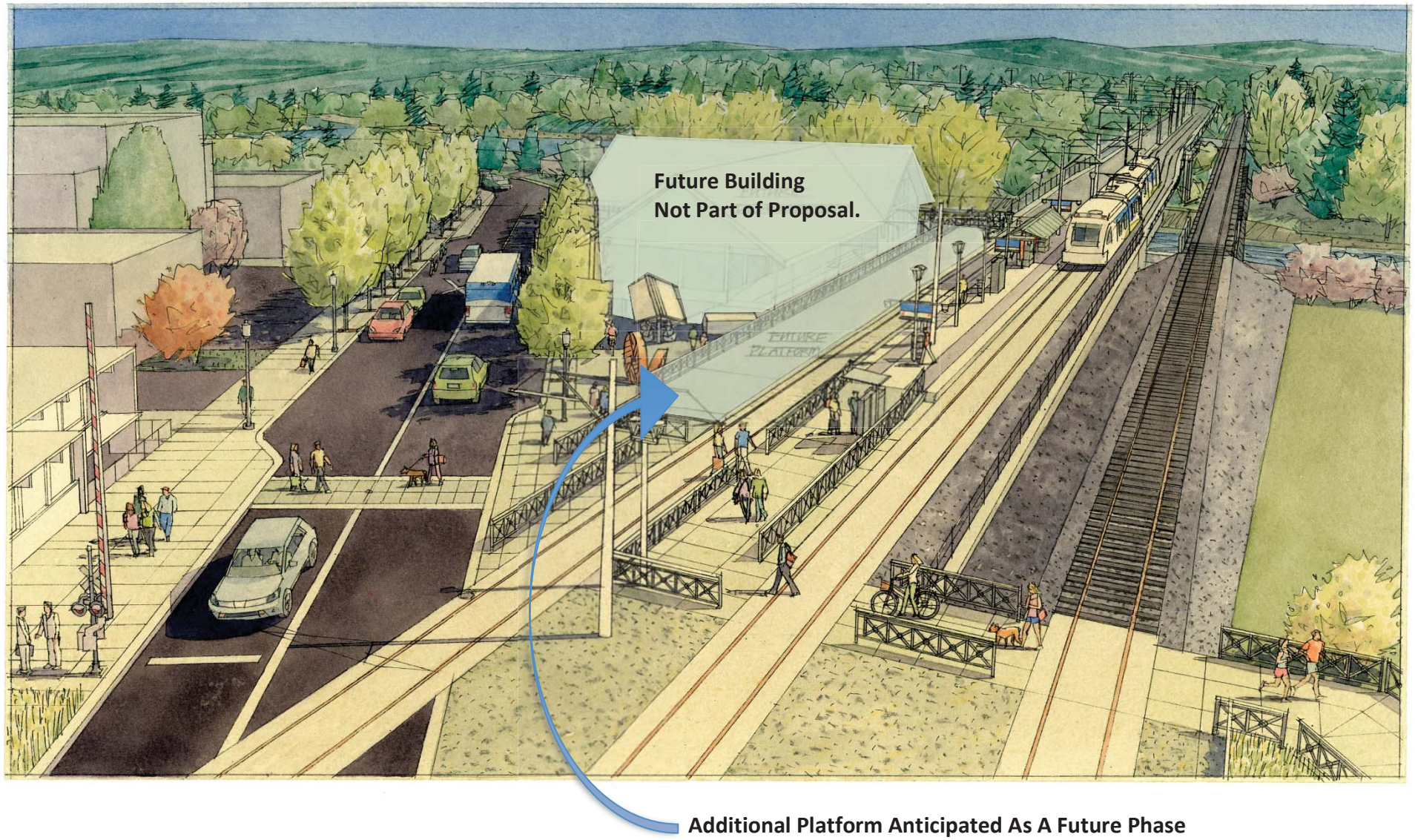


Affected Lot Boundary

* Art Locations (not in review – for reference only)

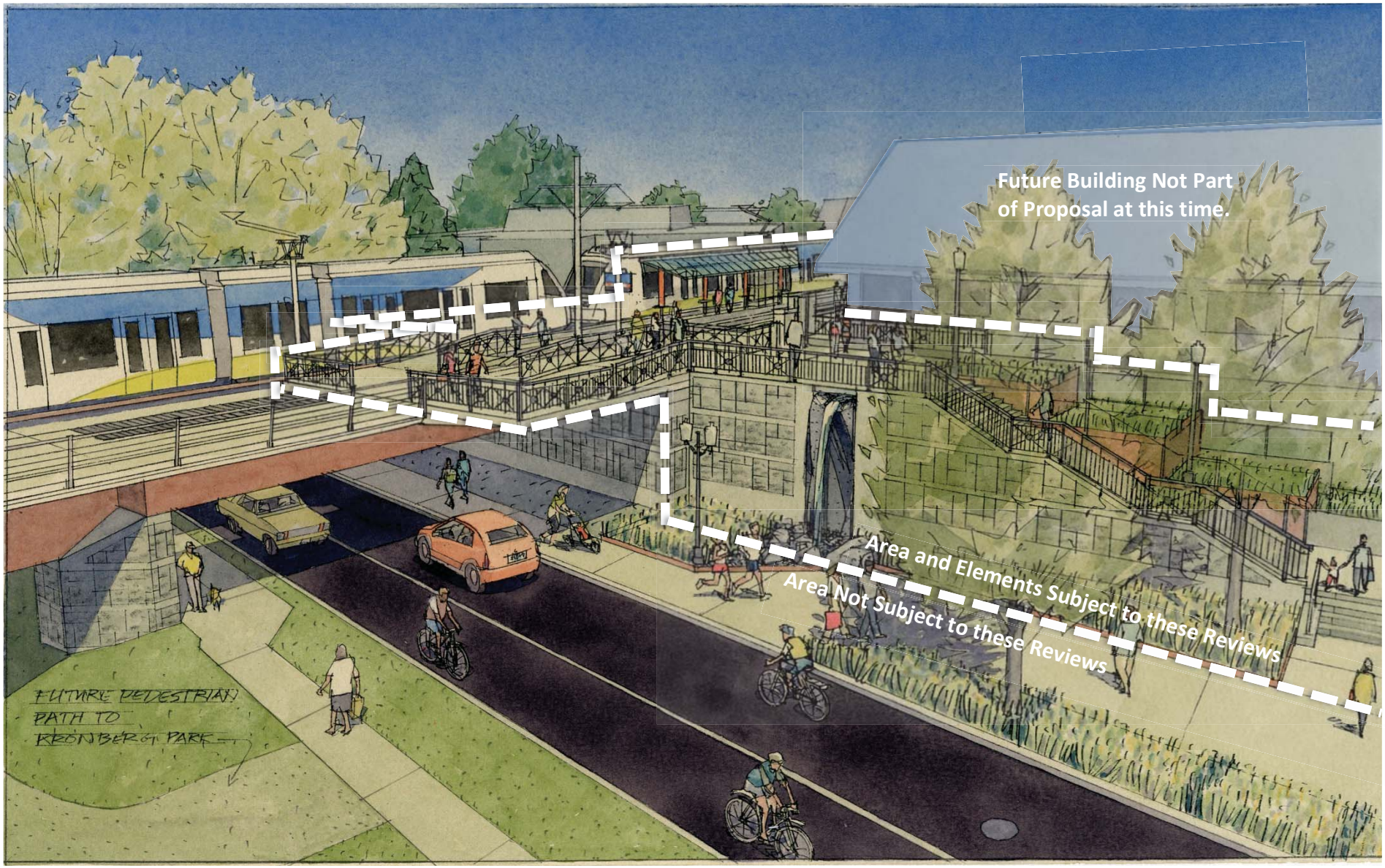
Primary Elements of Review

Exhibit O 6



View of Downtown Station from North

Exhibit P 1



View of Downtown Station from South

Exhibit P 2

Earlier Review **Current Review**

Abutment Wall, Stairs, and Cantilevered Access, and Art Location

Exhibit P 3

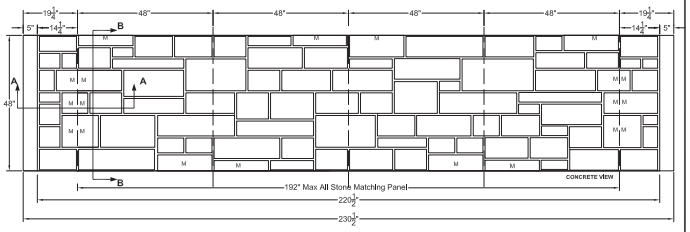
FITZGERALD FORMLINERS
Forming The Future ™

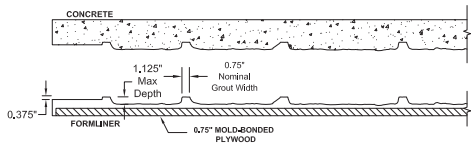
PATTERN 16999
Georgia Ashlar
Linear cut ashlar block

GrayLastic™
Elastomeric Urethane - up to 100 uses.
Mold bonded to 0.75" plywood. Add 1.125" to liner thickness.

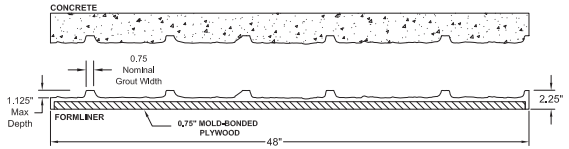
Stone & Rock
Part Size: 220.5" W x 48" H
Max Depth: 1.125"
Stone Sizes: 7"- 28" W
3"- 12" H

M= Match point
Dashed line indicates
vertical match point locations
192" Max All Stone Matching Panel





SECTION A-A
FORMLINER DETAIL

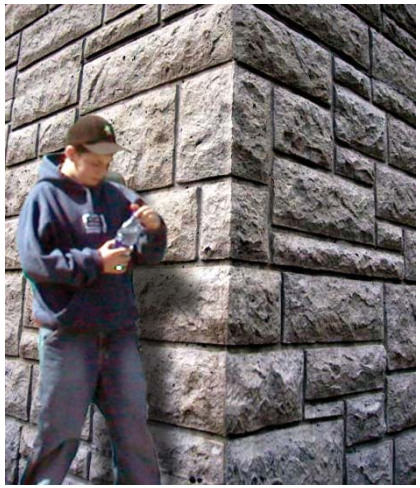


SECTION B-B
FORMLINER DETAIL

FITZGERALD FORMLINERS
1500 East Chestnut Avenue • Santa Ana, CA 92701 • Fax (714) 245-9715
Ph: (800) 547-7760 • Ph (714) 547-6710 • www.formliners.com

Pattern can be requested in AutoCad format.

File Name: S-16999-GR-9-27-07 Page 1 of 2



FITZGERALD FORMLINERS
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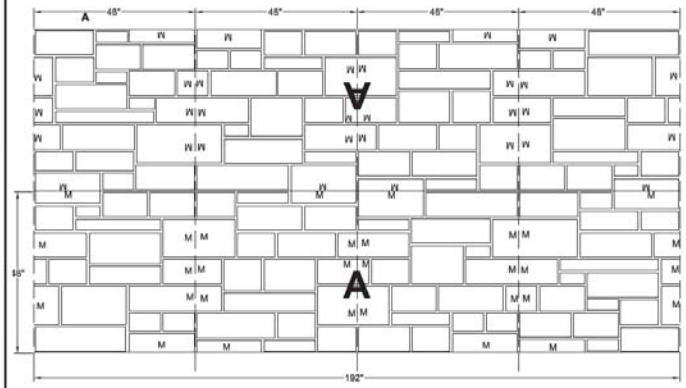

FITZGERALD FORMLINERS
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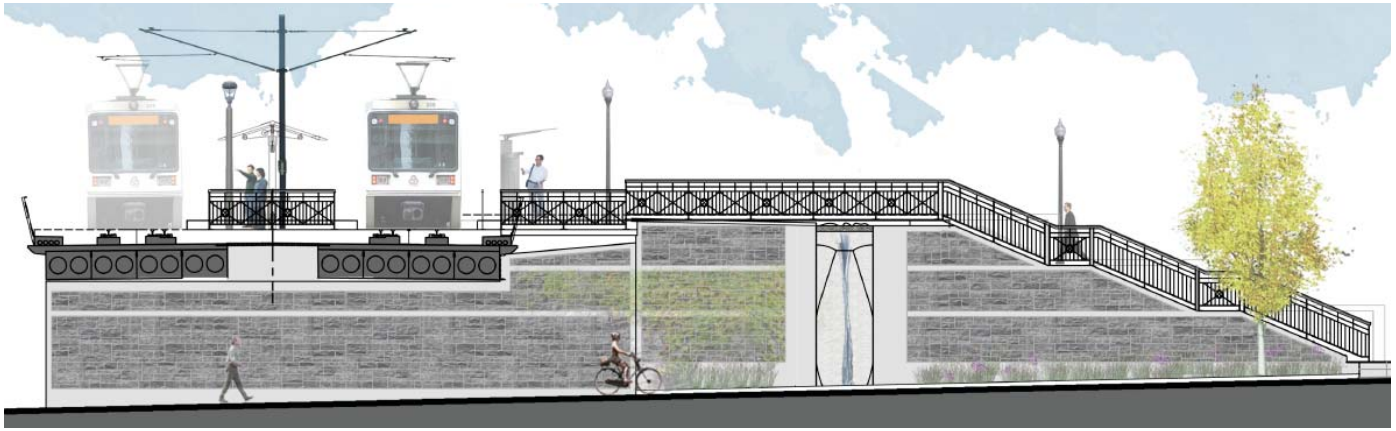
Pattern can be requested in AutoCad format.

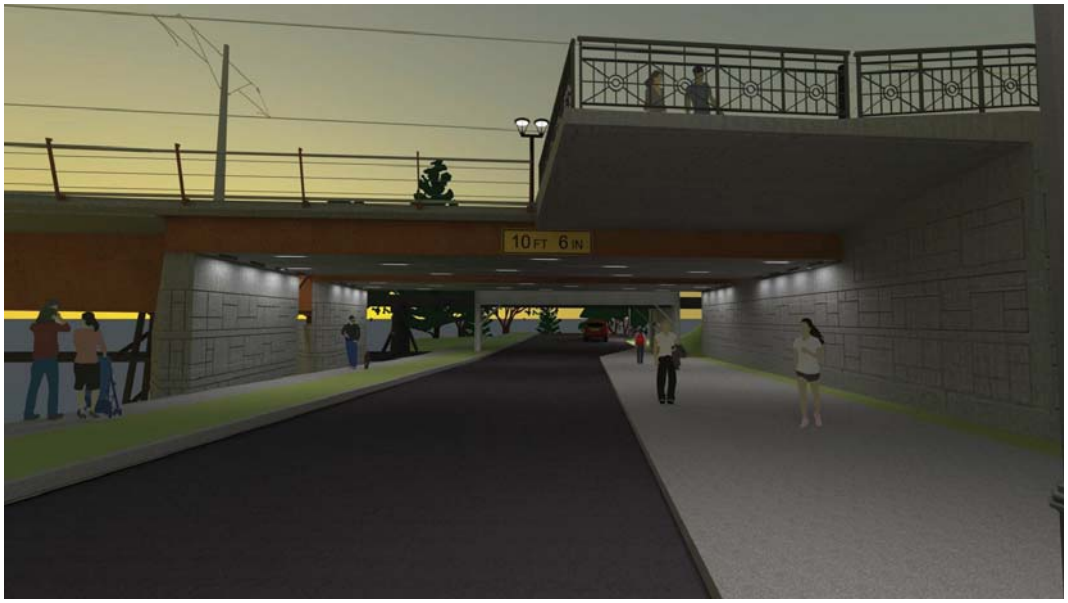
File Name: S-16999-GR-9-27-07 Page 2 of 2



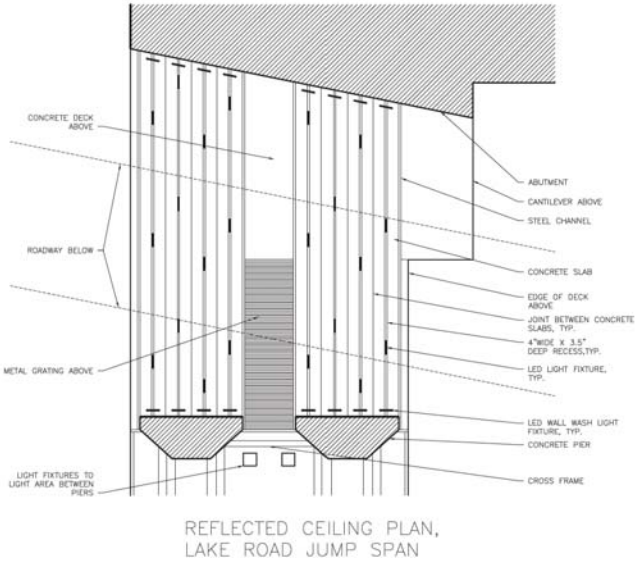
Ashlar Abutment Wall Details

Exhibit P 4

View Under Jump Span Showing Fixture Placement

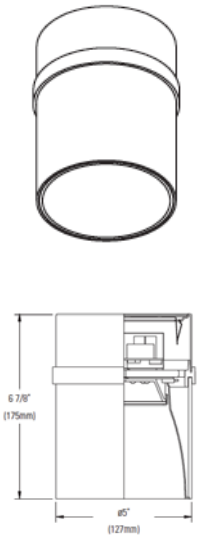


Night View – Lake Road



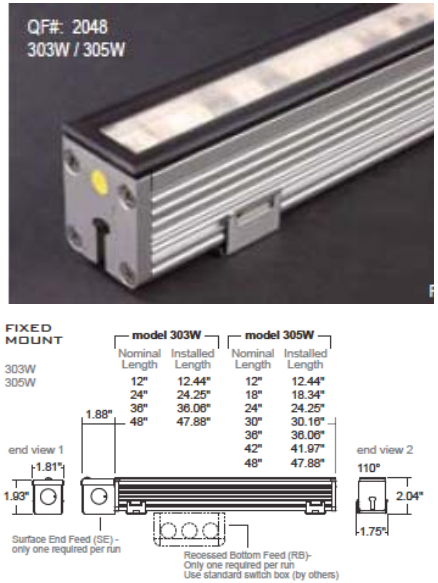
REFLECTED CEILING PLAN,
LAKE ROAD JUMP SPAN

Jump Span Reflected Lighting Plan



Mid-Column Fixtures

Wall Washing Fixtures



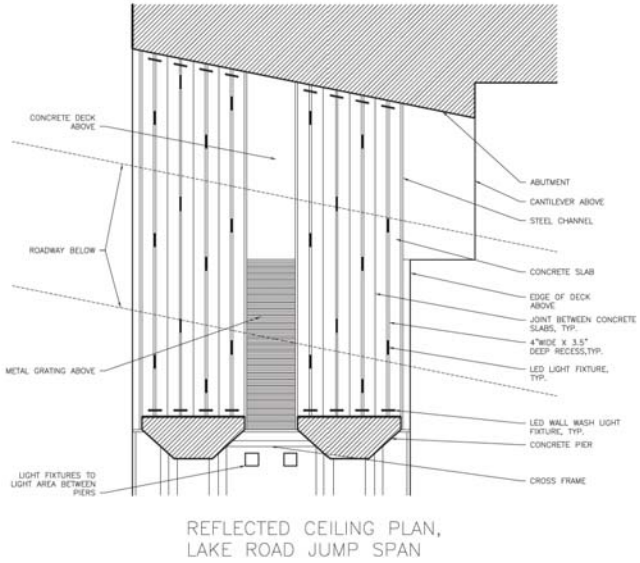
Recess Mounted Fixtures

Jump Span Lighting Refinements

Exhibit P 5

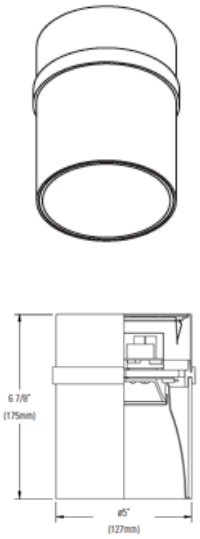
View Under Jump Span Showing Fixture Placement

Night View – Lake Road

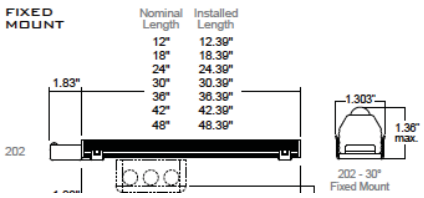


REFLECTED CEILING PLAN,
LAKE ROAD JUMP SPAN

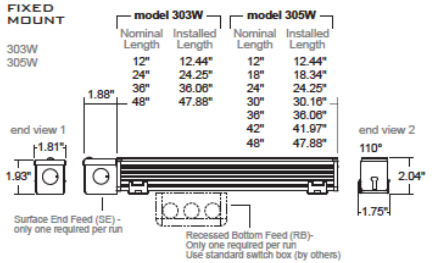
Jump Span Reflected Lighting Plan



Mid-Column Fixtures



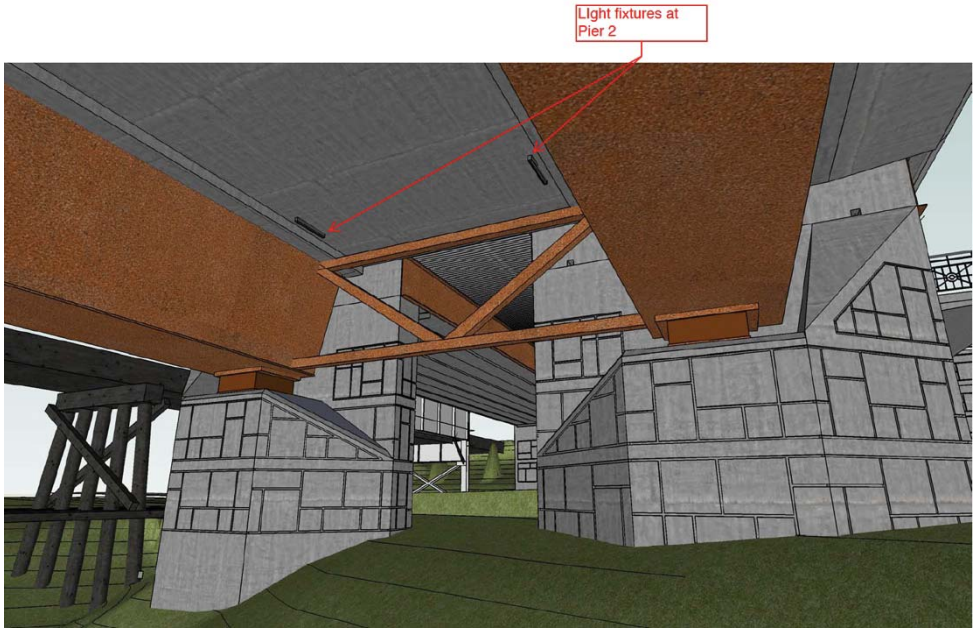
Wall Washing Fixtures



Recess Mounted Fixtures

Jump Span Lighting Refinements

Exhibit P 5A

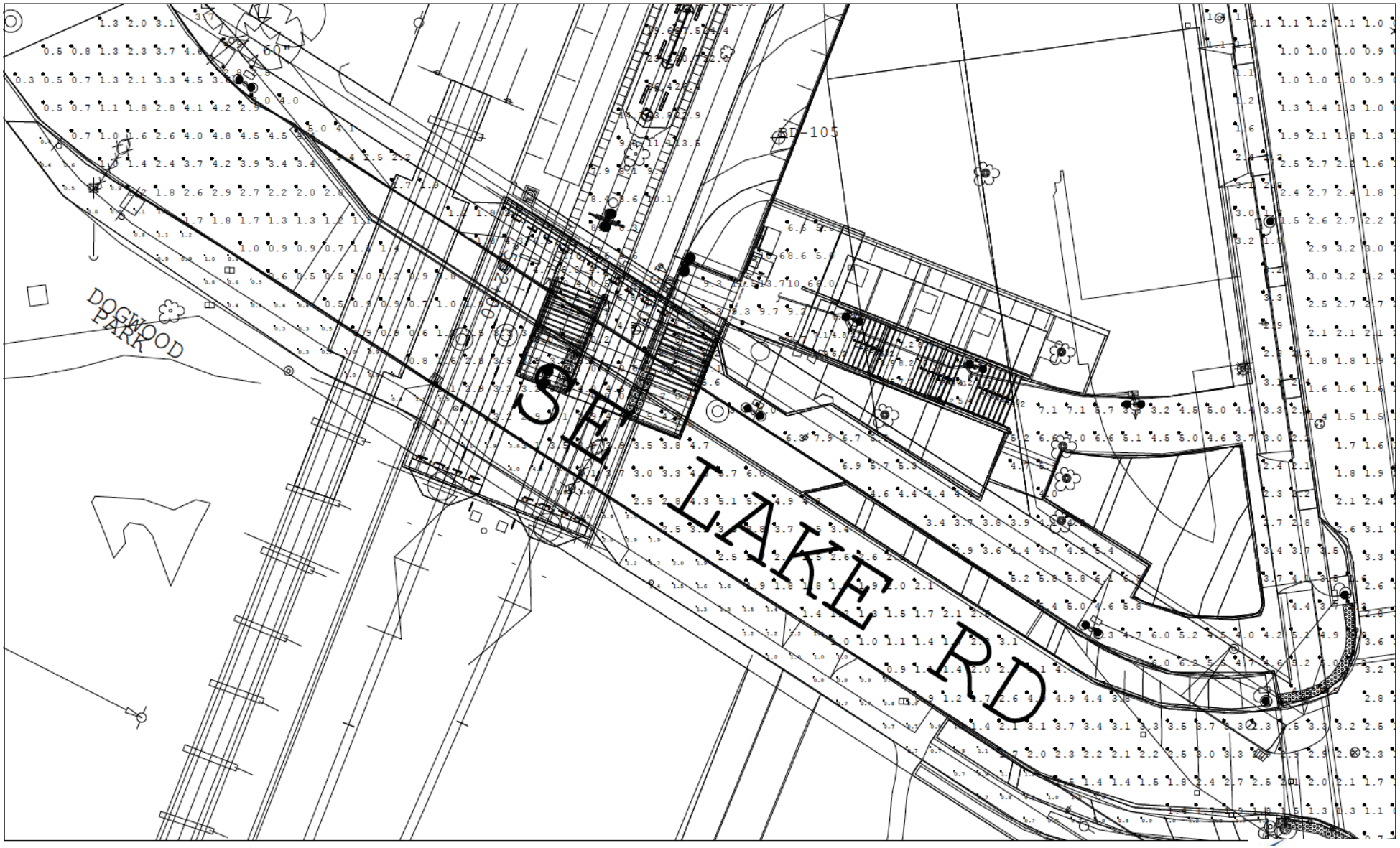


Fixture Placement By Columns

Jump Span Lighting: Night and Day from Lake Road

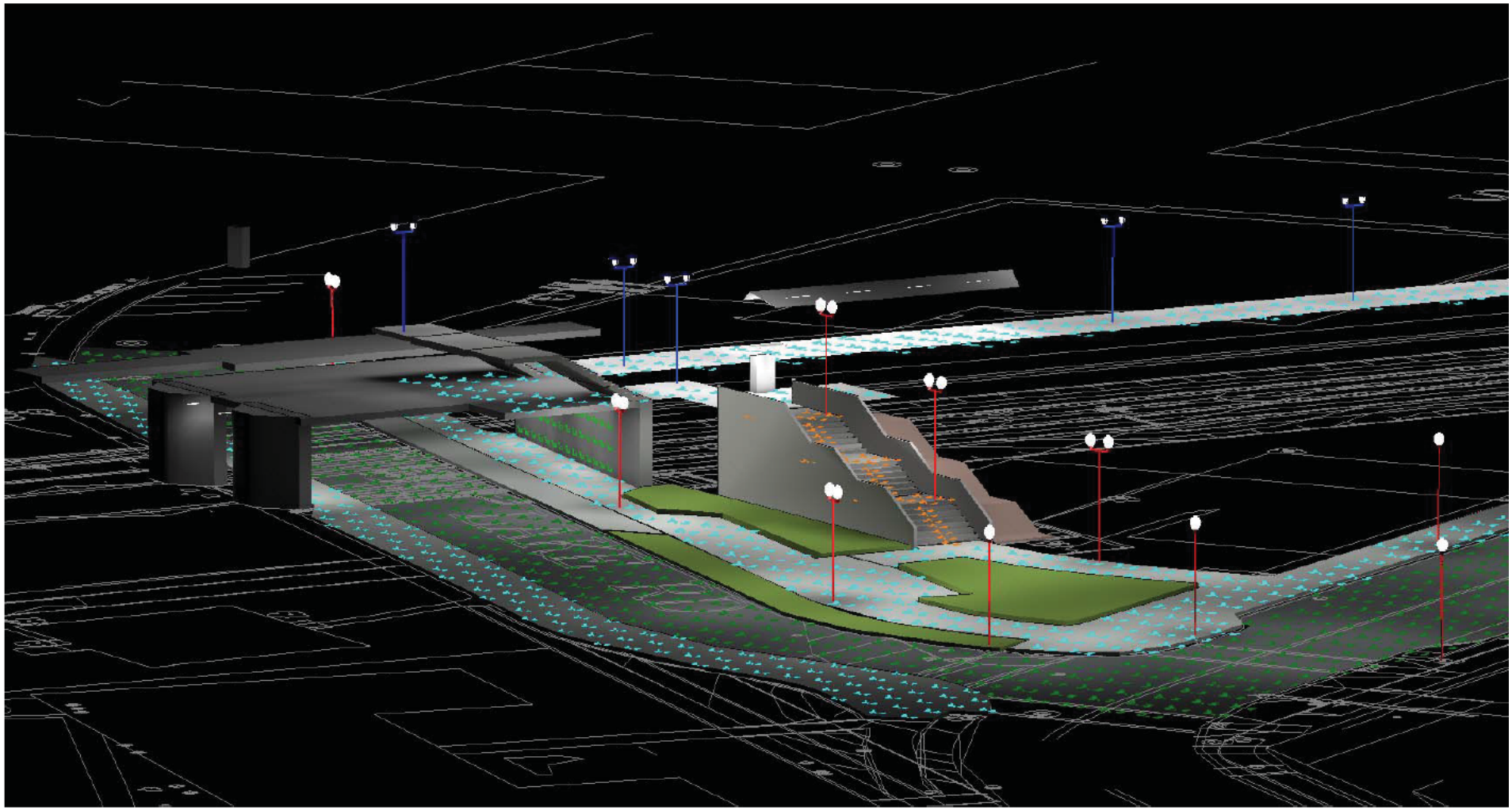
Jump Span Lighting Refinements

Exhibit P 5B



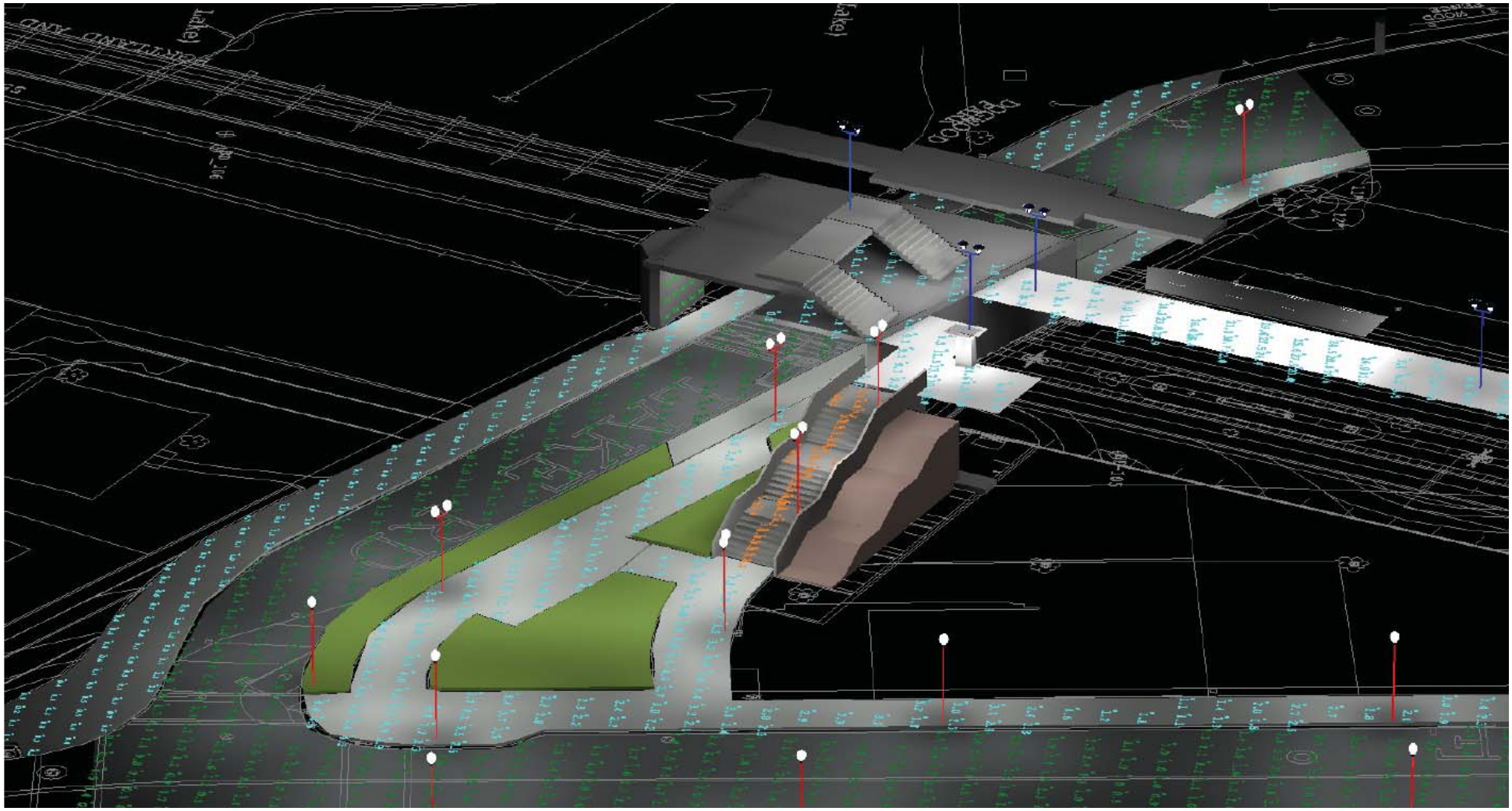
Jump Span Photometric Analysis

Exhibit P 6A



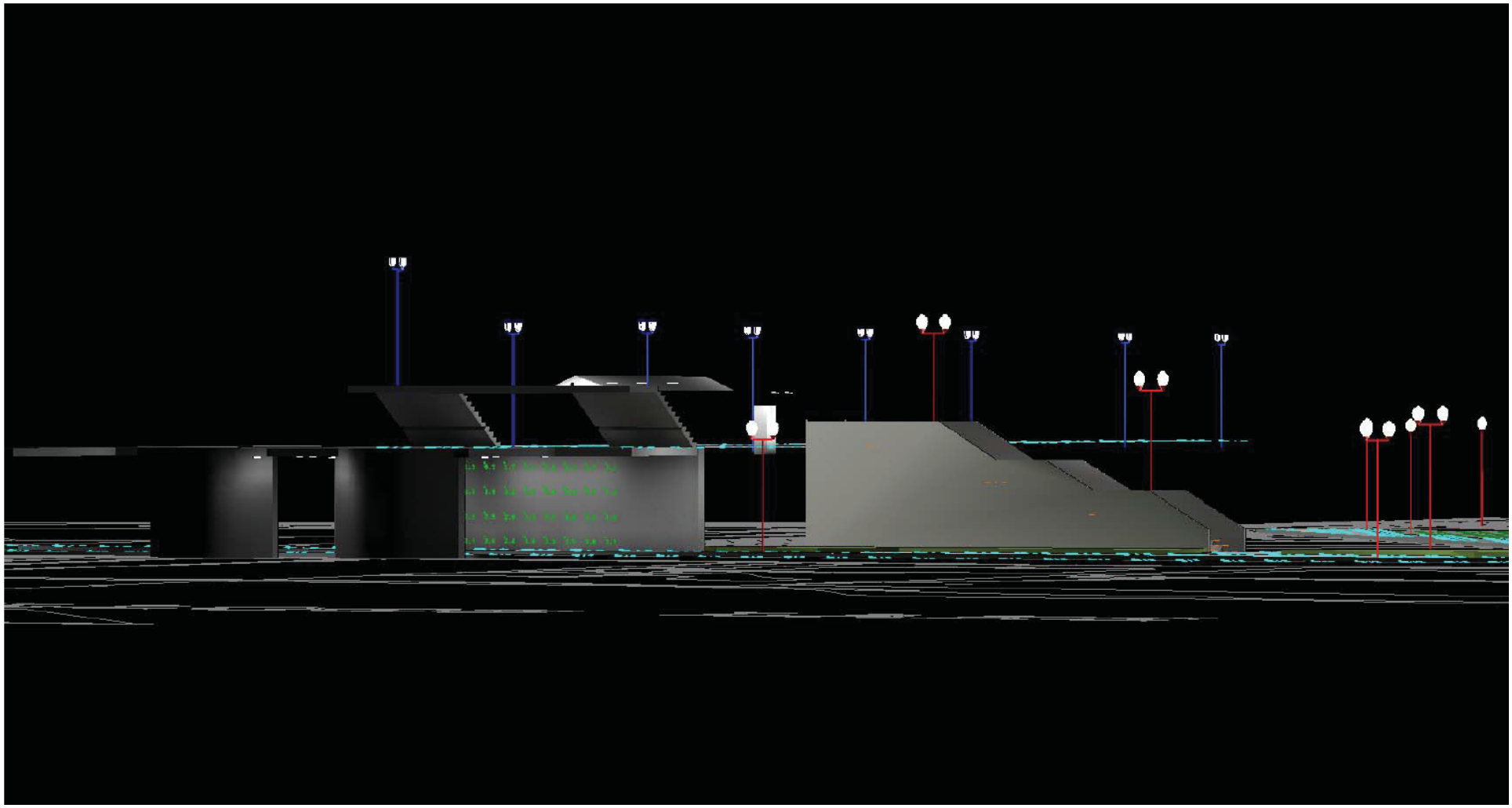
Photometric Analysis

Exhibit P 6B



Photometric Analysis

Exhibit P 6C



Photometric Analysis

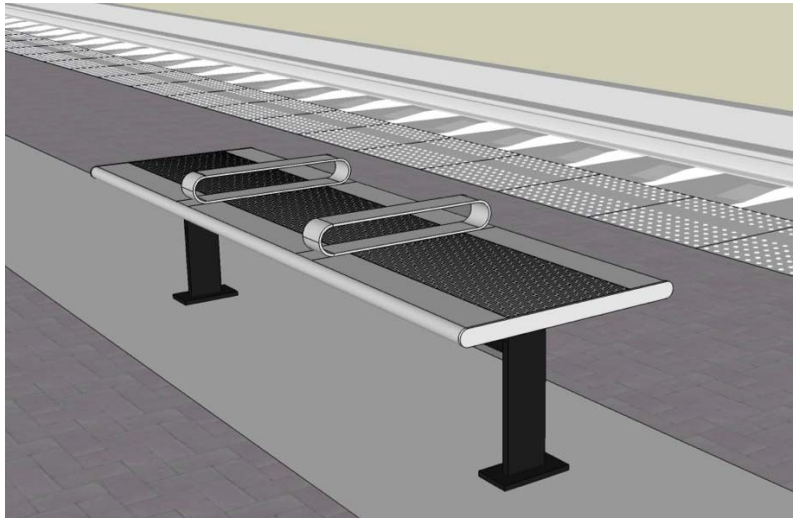
Exhibit P 6D

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	4	TVM	SINGLE	N.A.	0.279	TVM - Winona WSL 305W 65 5k LTL20528
	8	SA15	SINGLE	5800	0.711	SA15 Guth Marquee 2T8
	8	SA3	BACK-BACK	N.A.	0.808	SA3 - Beta ARE EDR 5M 10 D UL 350 60K (350mA)
	6	SA5B	BACK-BACK	16000	0.595	SA5B - Hadco TW5
	16	SA21A	SINGLE	4196	0.183	SA21A - Winona WSL-305W-4-30-30K-ND24V-A-NAA
	24	SA21	SINGLE	N.A.	0.182	SA21 - Winona WSL-305W-4-110-30K-ND24V-A-NAA
	12	SA5A	SINGLE	16000	0.595	SA5B - Hadco TW5

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ABUTMENT	Illuminance	Fc	3.62	6.9	0.7	5.17	9.86
Lake Road_Top_1	Illuminance	Fc	2.43	6.0	0.3	8.10	20.00
PIER 1	Illuminance	Fc	3.58	6.1	1.7	2.11	3.59
PIER 2	Illuminance	Fc	4.36	6.9	2.5	1.74	2.76
Platform_Planar	Illuminance	Fc	7.68	30.7	0.0	N.A.	N.A.
Sidewalk1_Top_1	Illuminance	Fc	3.86	7.9	1.1	3.51	7.18
Sidewalk2_Top	Illuminance	Fc	1.18	6.5	0.2	5.90	32.50
Stairs_1_Side_11	Illuminance	Fc	6.20	6.2	6.2	1.00	1.00
Stairs_1_Side_13	Illuminance	Fc	5.50	5.5	5.5	1.00	1.00
Stairs_1_Side_15	Illuminance	Fc	4.90	4.9	4.9	1.00	1.00
Stairs_1_Side_17	Illuminance	Fc	4.00	4.0	4.0	1.00	1.00
Stairs_1_Side_19	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
Stairs_1_Side_5	Illuminance	Fc	6.97	10.0	3.5	1.99	2.86
Stairs_1_Side_7	Illuminance	Fc	7.10	7.1	7.1	1.00	1.00
Stairs_1_Side_9	Illuminance	Fc	7.00	7.0	7.0	1.00	1.00
Stairs_2_Side_11_1	Illuminance	Fc	3.50	3.5	3.5	1.00	1.00
Stairs_2_Side_13_1	Illuminance	Fc	5.00	5.0	5.0	1.00	1.00
Stairs_2_Side_15_1	Illuminance	Fc	5.80	5.8	5.8	1.00	1.00
Stairs_2_Side_17_1	Illuminance	Fc	5.20	5.2	5.2	1.00	1.00
Stairs_2_Side_5_1	Illuminance	Fc	5.00	7.1	3.1	1.61	2.29
Stairs_2_Side_7_1	Illuminance	Fc	2.50	2.5	2.5	1.00	1.00
Stairs_2_Side_9_1	Illuminance	Fc	2.90	2.9	2.9	1.00	1.00
Stairs_Side_11_1	Illuminance	Fc	3.10	3.1	3.1	1.00	1.00
Stairs_Side_13_1	Illuminance	Fc	3.90	3.9	3.9	1.00	1.00
Stairs_Side_15_1	Illuminance	Fc	3.70	3.7	3.7	1.00	1.00
Stairs_Side_17_1	Illuminance	Fc	4.00	4.0	4.0	1.00	1.00
Stairs_Side_19_1	Illuminance	Fc	4.20	4.2	4.2	1.00	1.00
Stairs_Side_5_1	Illuminance	Fc	2.90	5.4	0.0	N.A.	N.A.
Stairs_Side_7_1	Illuminance	Fc	3.00	3.0	3.0	1.00	1.00
Stairs_Side_9_1	Illuminance	Fc	3.10	3.1	3.1	1.00	1.00
LAKE ROAD - UNDER OVERPASS	Illuminance	Fc	3.05	6.9	0.0	N.A.	N.A.

Photometric Analysis

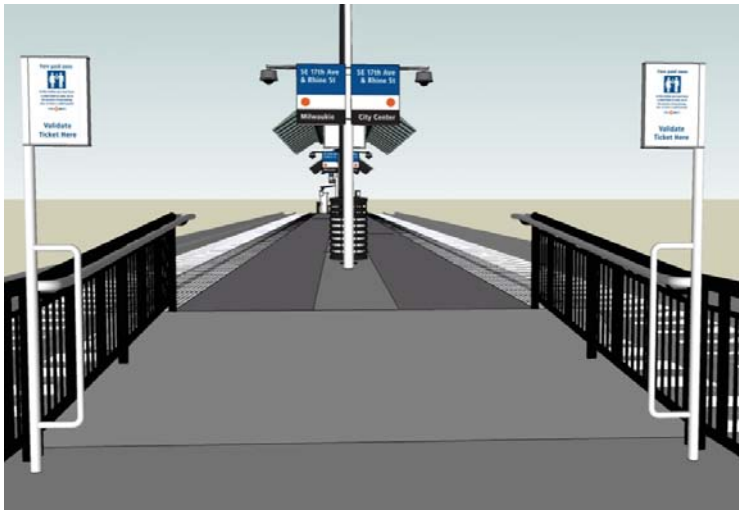
Exhibit P 6E



Freestanding Platform Bench

Bike Lockers

Platform Equipment



Platform System Signage

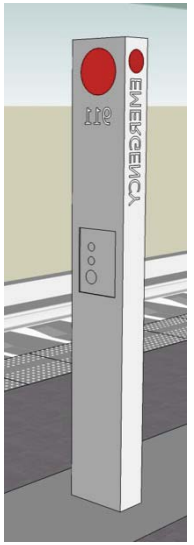
Stainless Receptacles

Transit Information Signage

Signal Bungalows

Ticket Vending Machines

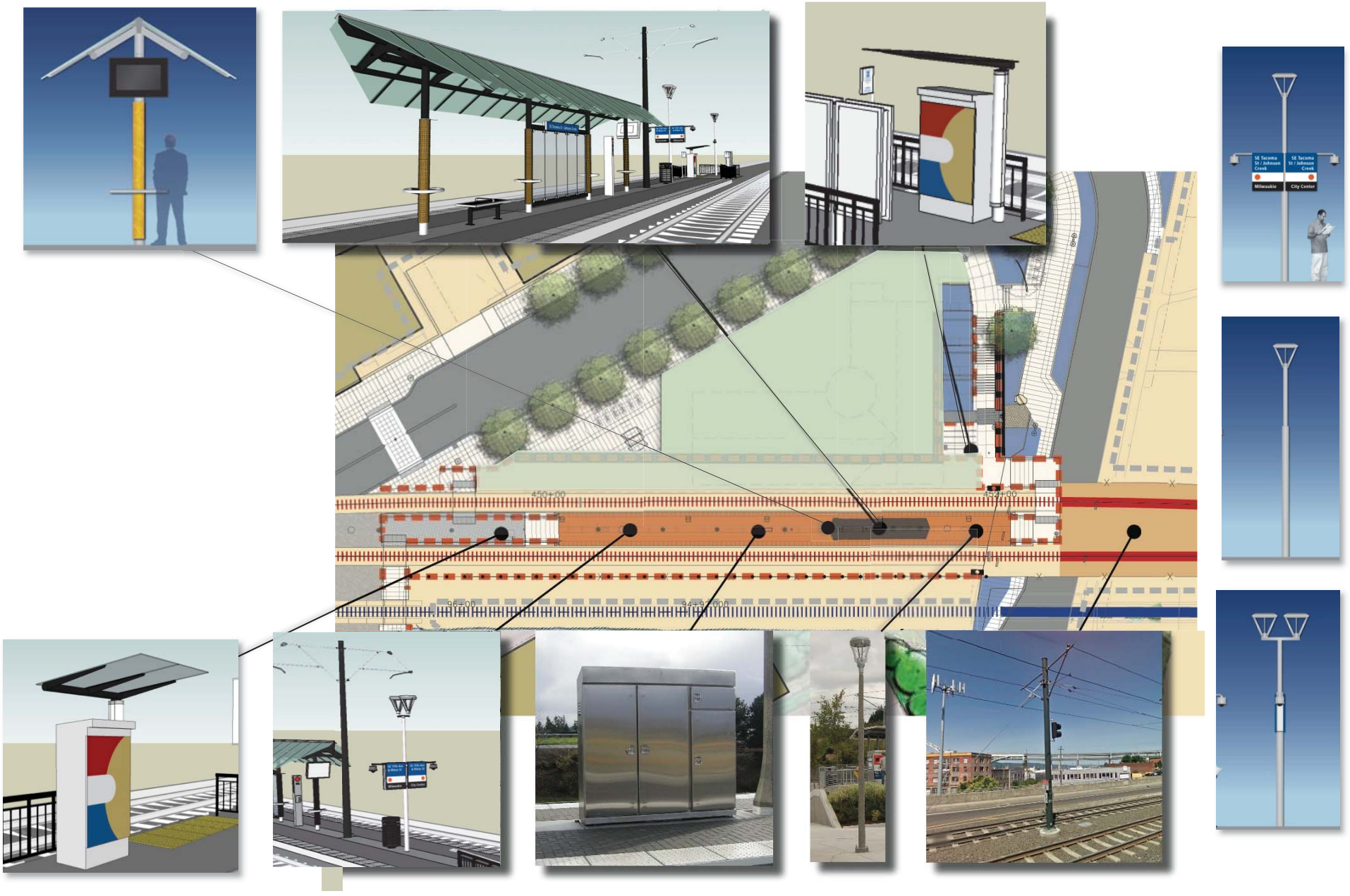
OCS Poles



Phone

Elements of Continuity (For Information only. Not subject to review)

Exhibit P 7

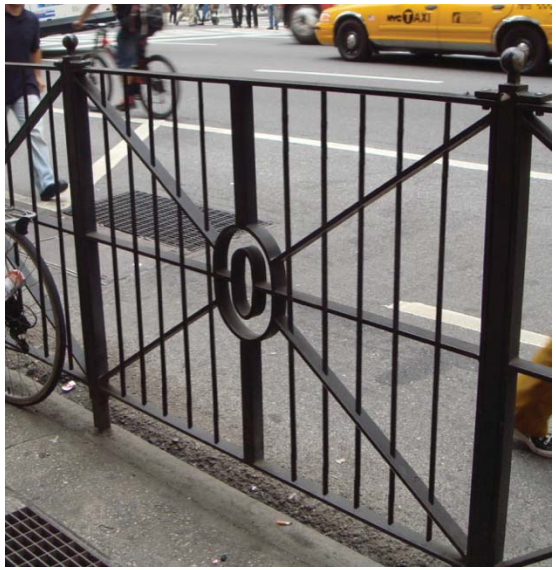


Station Elements

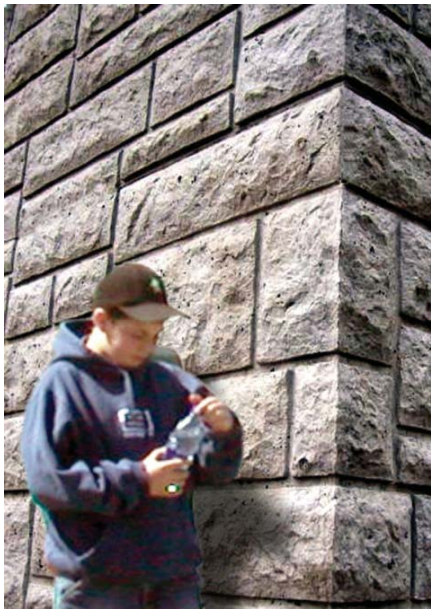
Exhibit P 8

Off-Platform Milwaukie-Black Benches and Receptacles (not under review)

Milwaukie Standard Street Lights (not under review)



Milwaukie Specific Railings (mock-up shown)

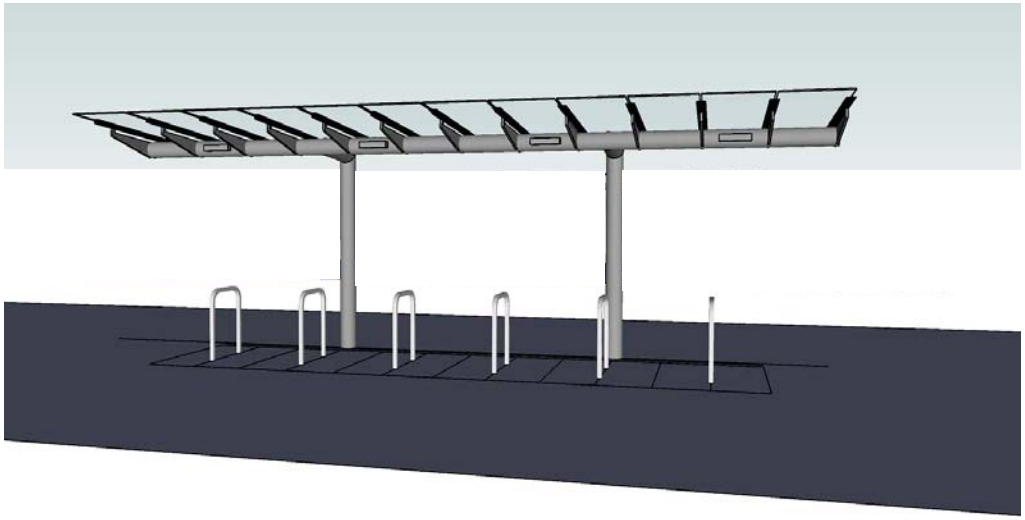


Ashlar Modular Wall

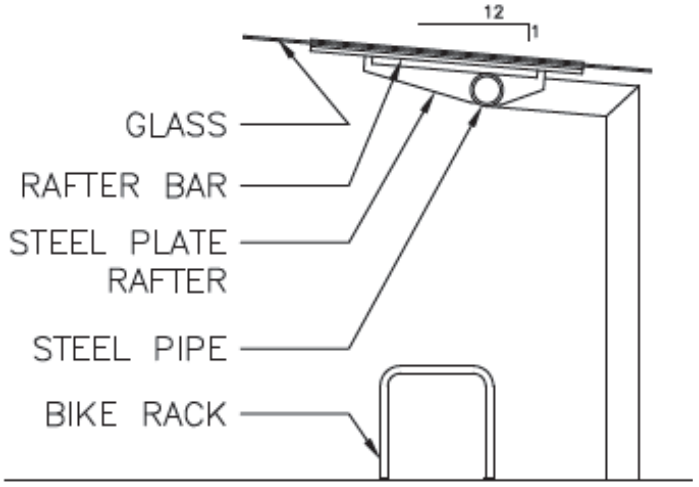
Detailed Bollards (not under review)

Milwaukie Specific Plantings

Exhibit P 9

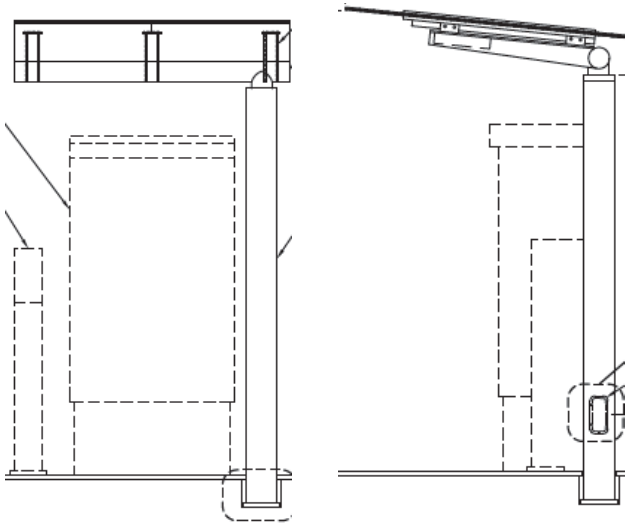


Bike Shelter and Racks



Bike Shelter Section

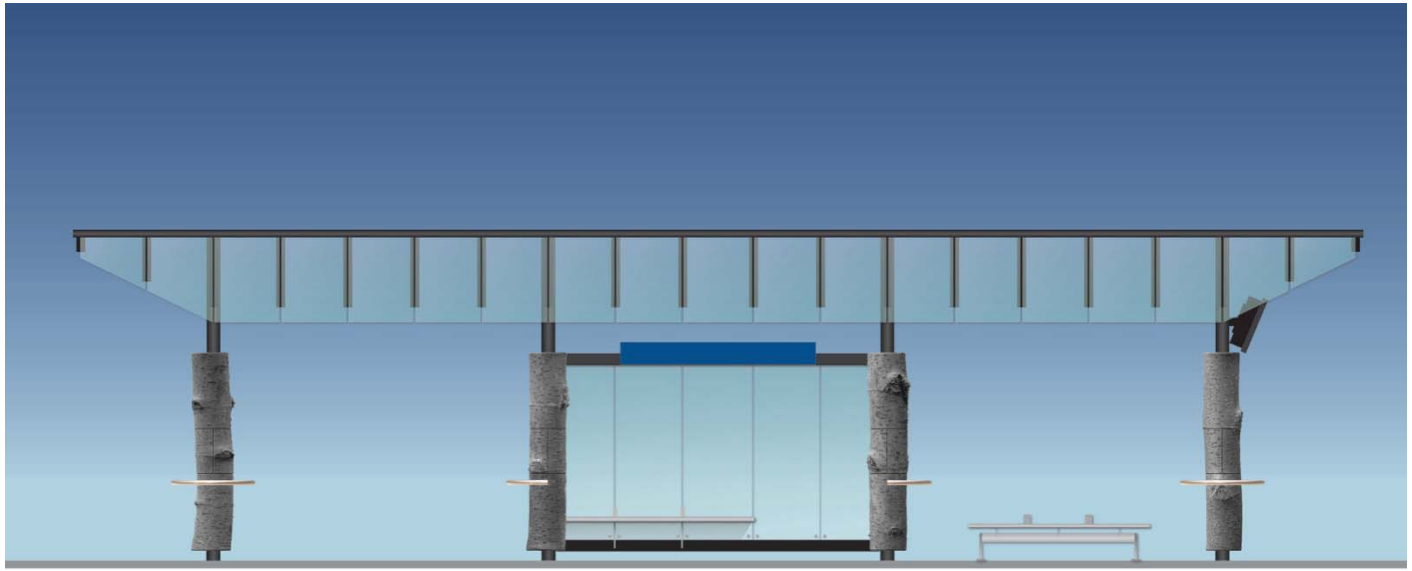
Station-specific Shelter and TVM Shelter With Other Platform Amenities



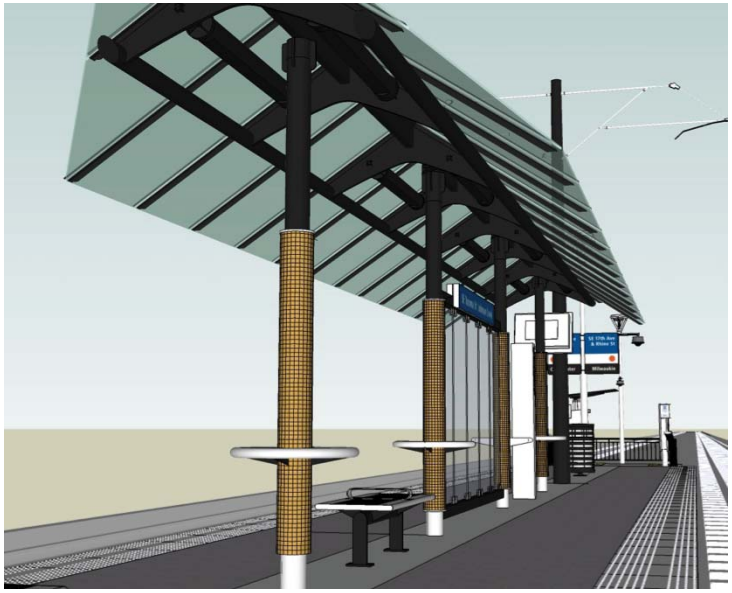
TVM Shelter Elevation & Section

Elements of Distinction – Bike and TVM Shelters

Exhibit P 10



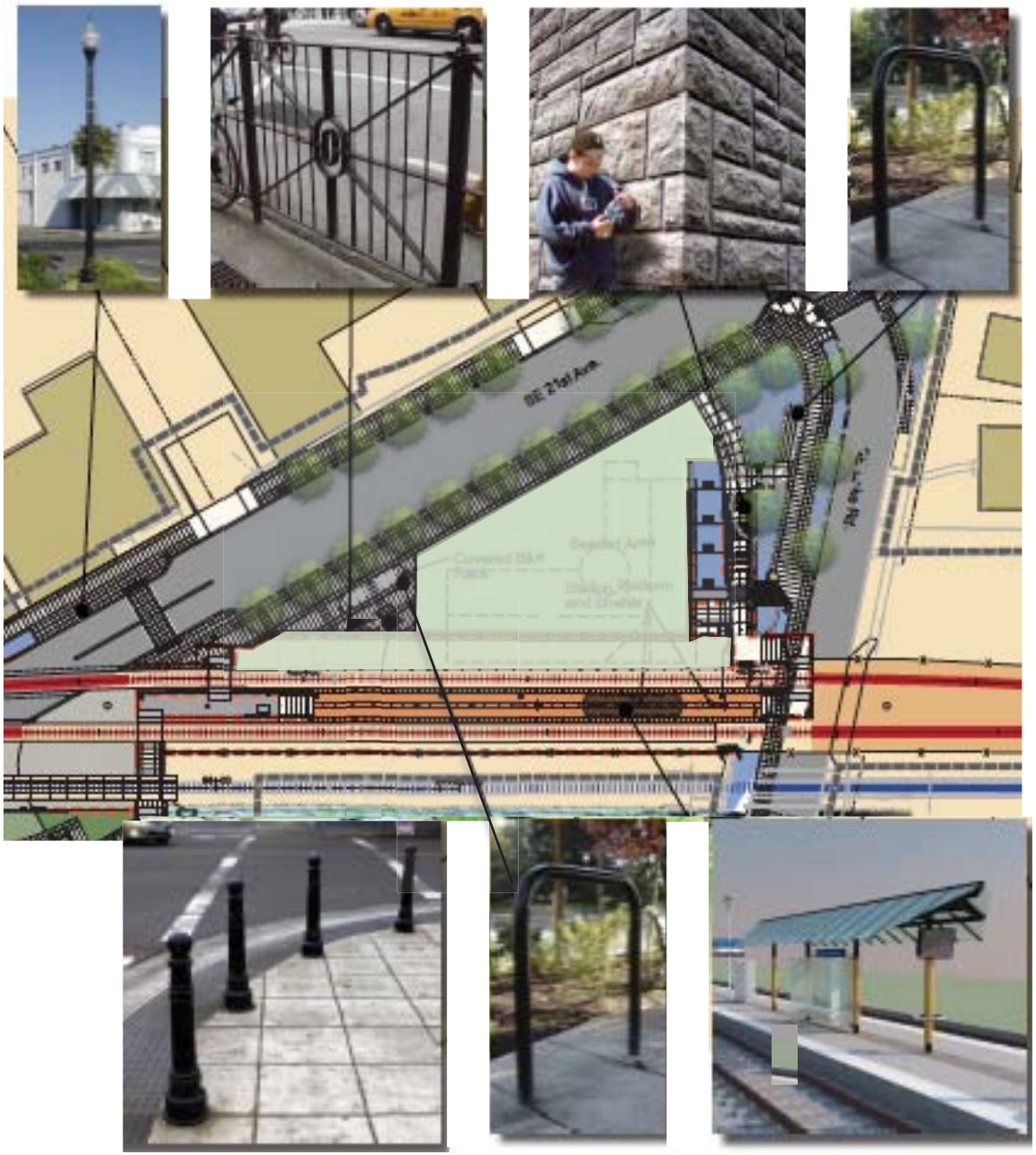
View of Shelter With Integrated Art



Diagrammatic Views With Additional Platform Amenities
(See above for specific column intentions)

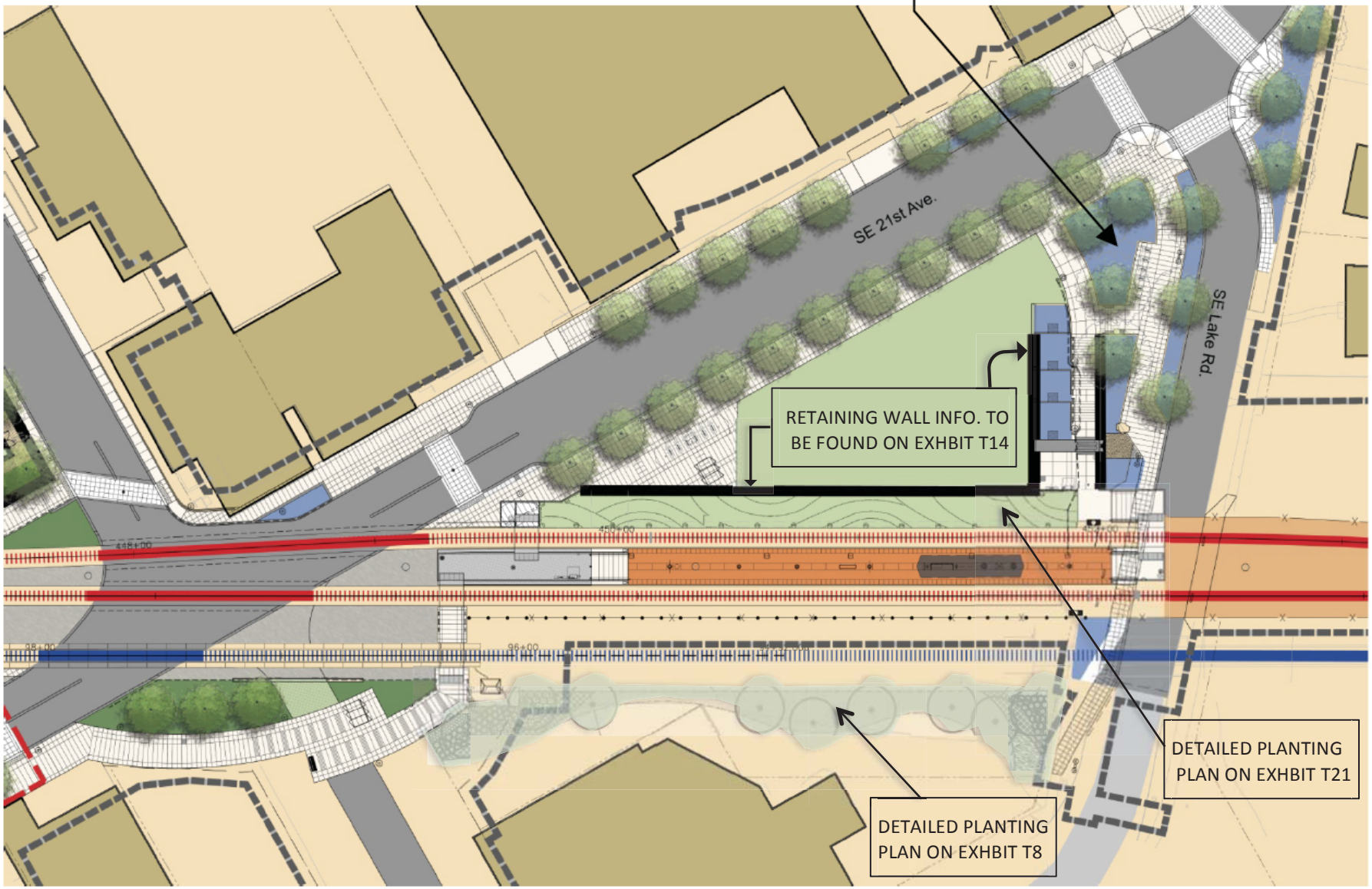
Elements of Distinction – Platform Shelter Design

Exhibit P 11



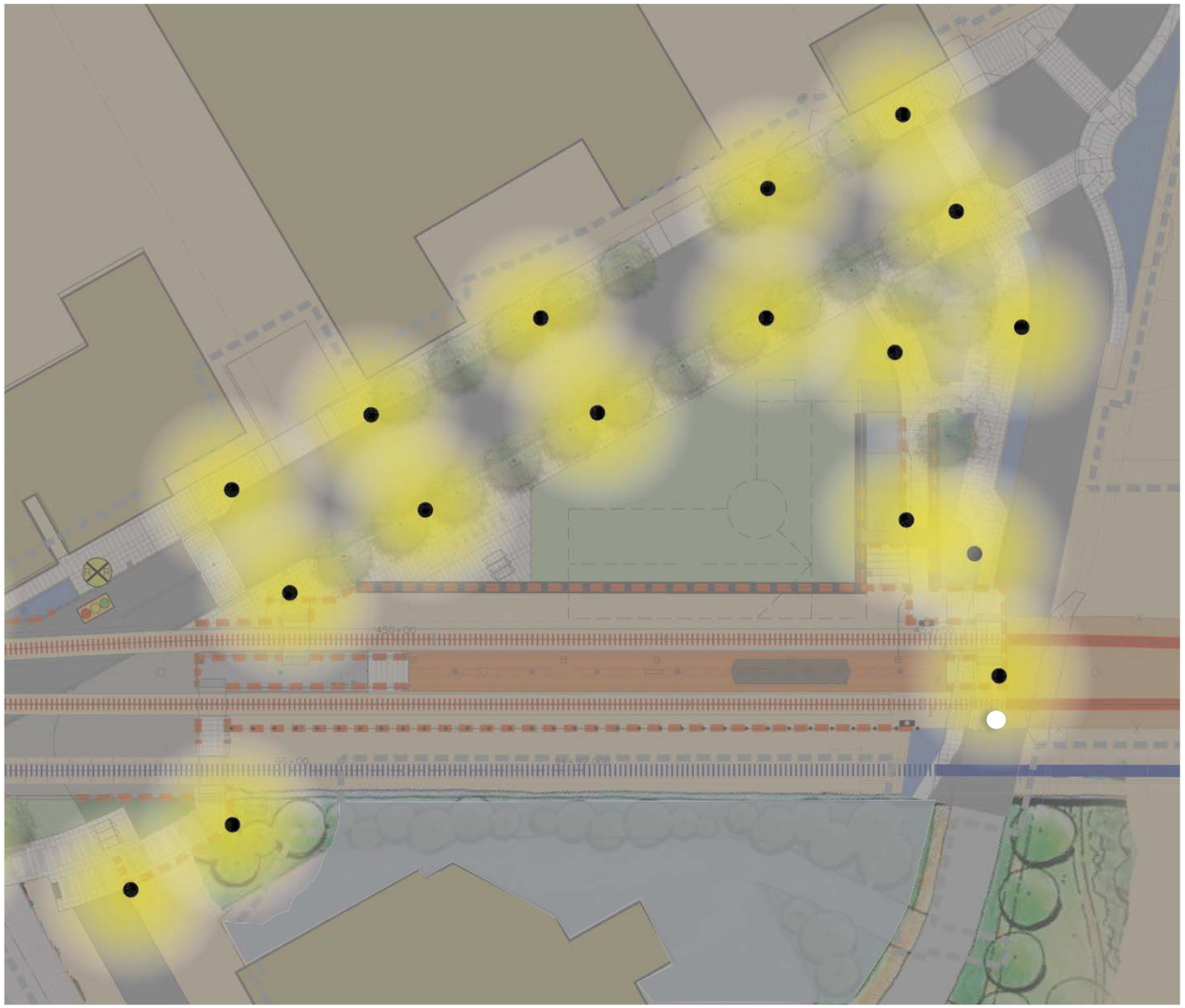
Elements of Distinction in Place

Exhibit P 12

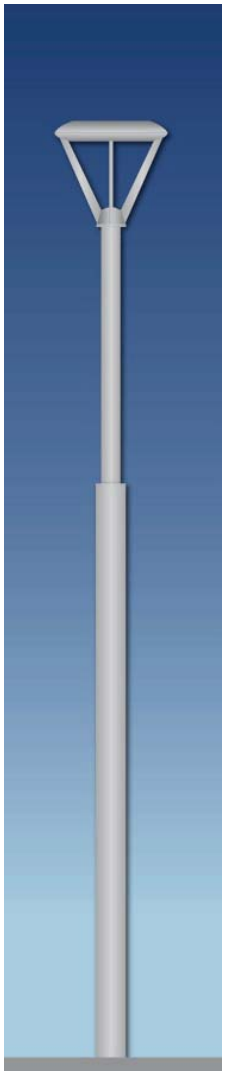


Landscape Plan with Plant Selections

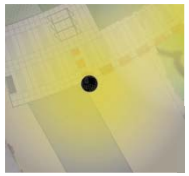
Exhibit P 13



Street Light
(not in review)



Platform Light
(not in review)

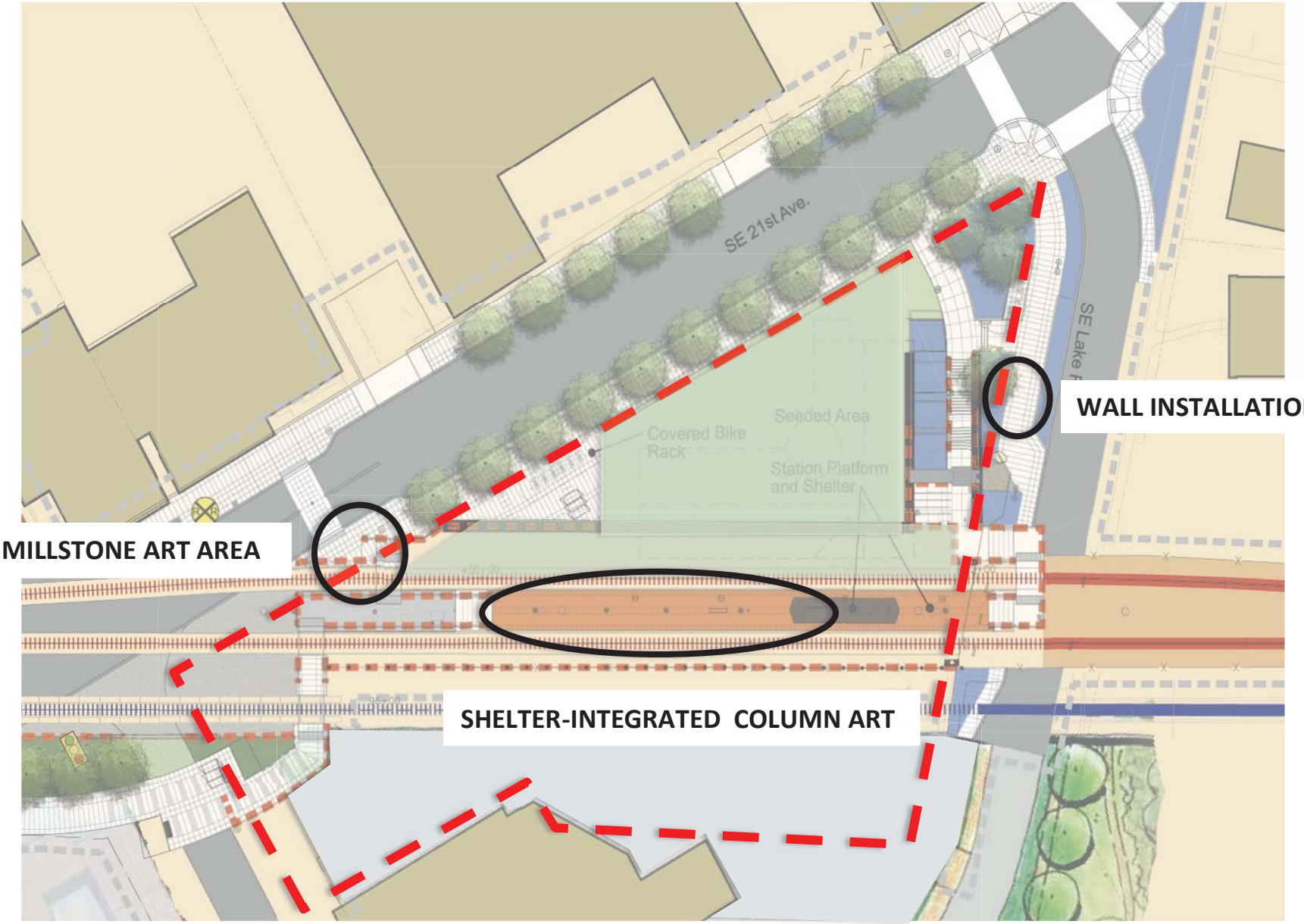


Street Lighting

Light from Platform Fixture Directly Above Street

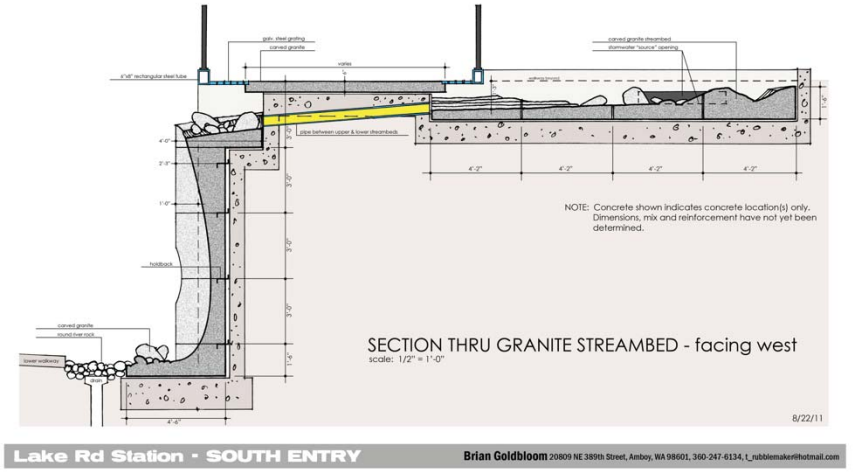
Ambient Lighting of Streets in Vicinity of the Station

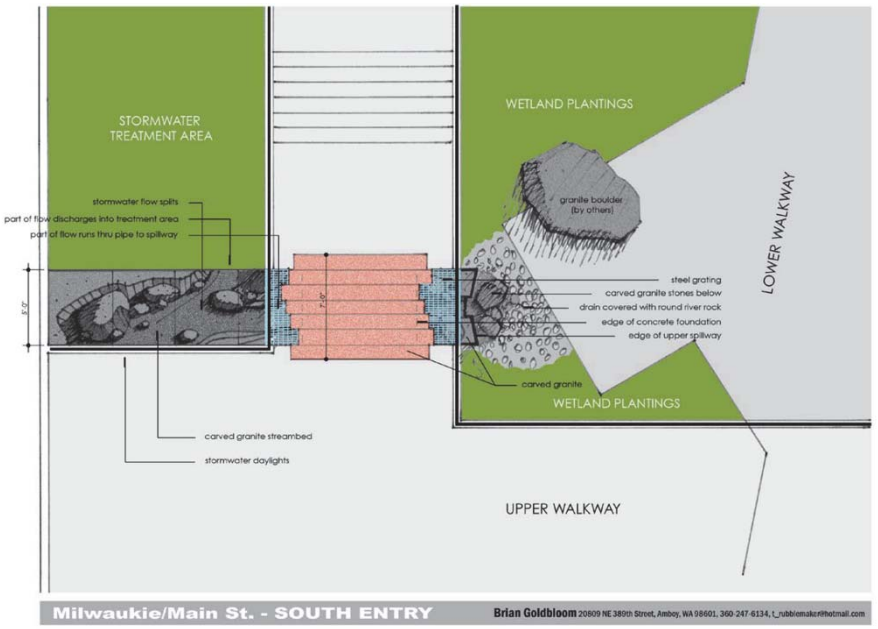
Exhibit P14



Art Locations (art not subject to review: for information only)

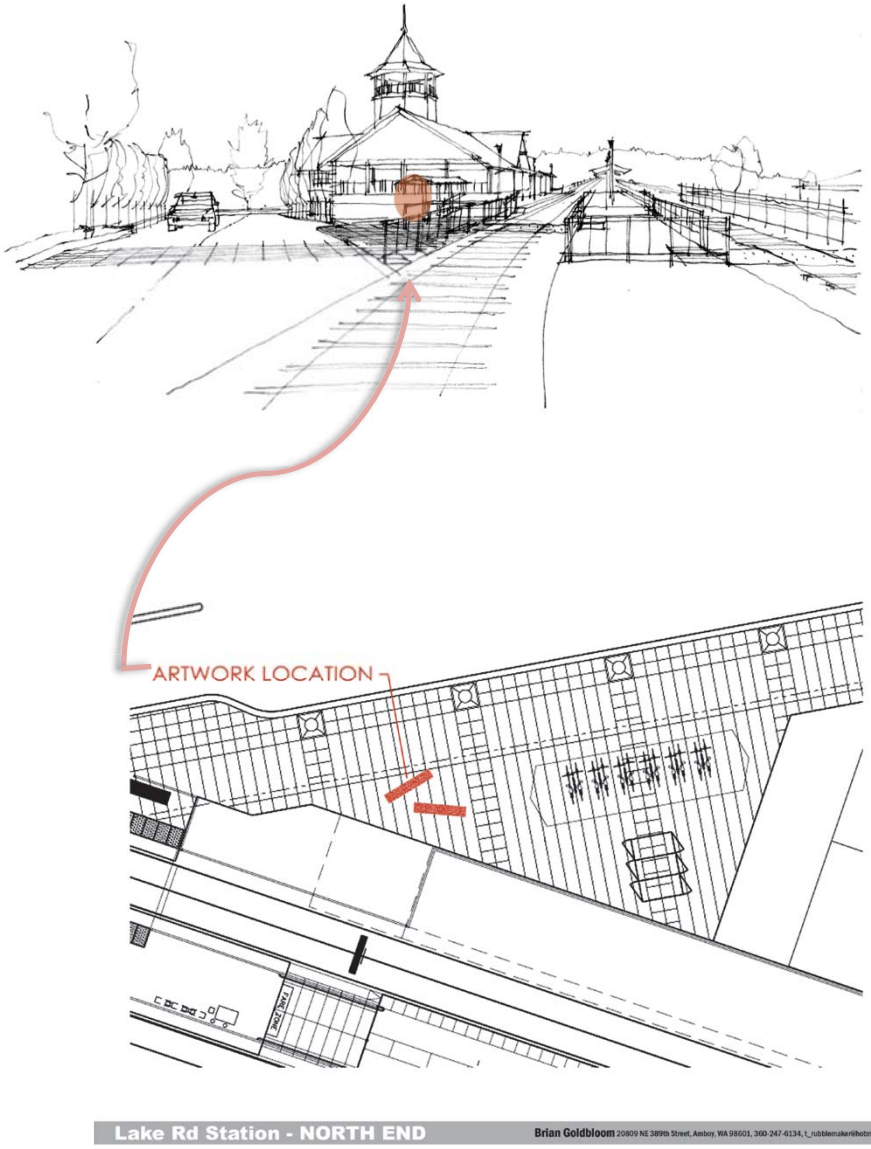
Exhibit P 15

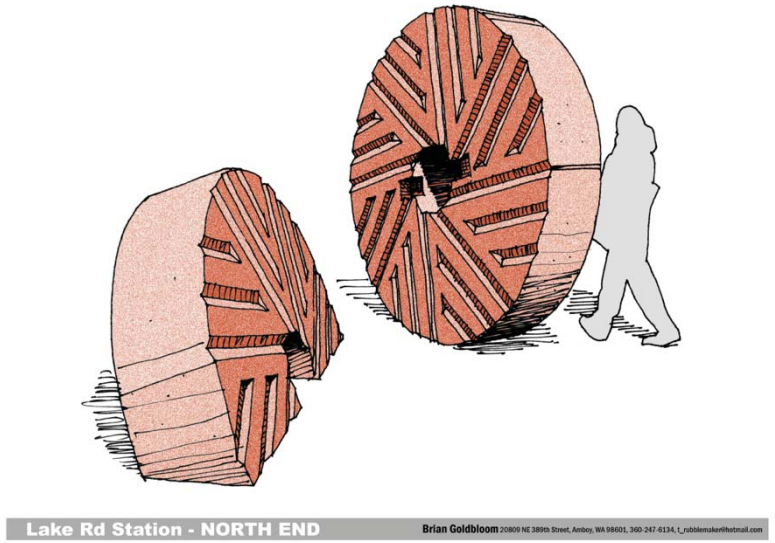


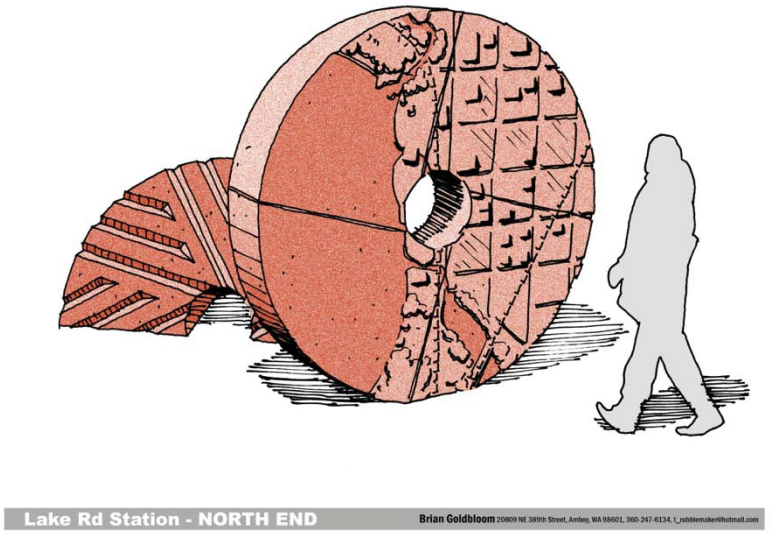


Lake Road Art Installation

Exhibit P 16

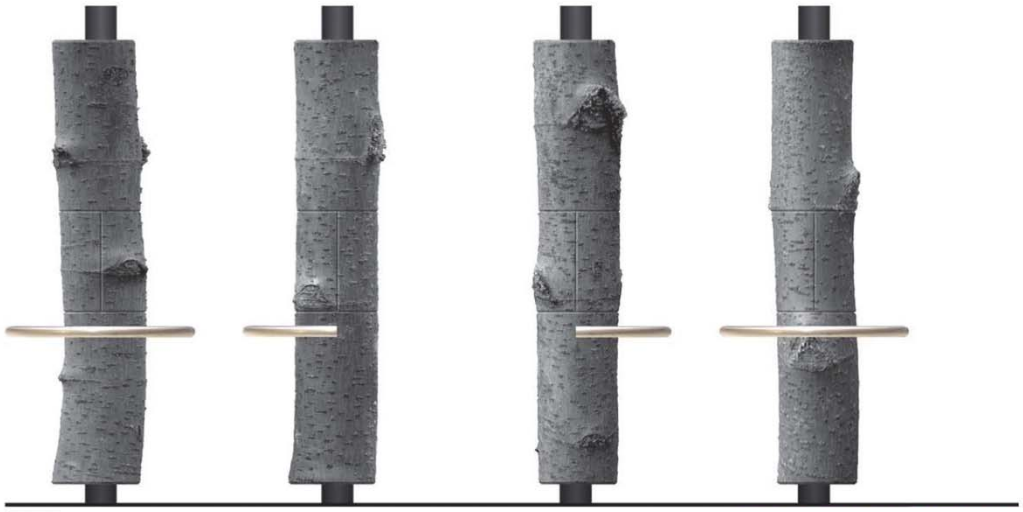




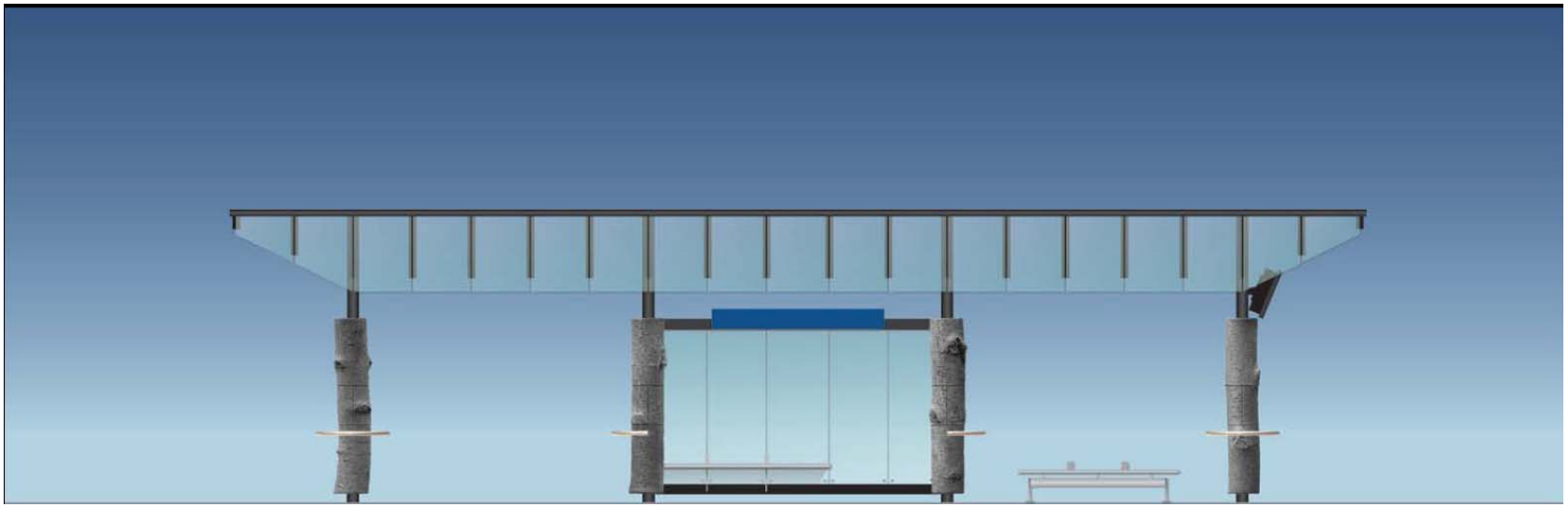


Millstone Art Installation

Exhibit P 17



Detailed View of Columns

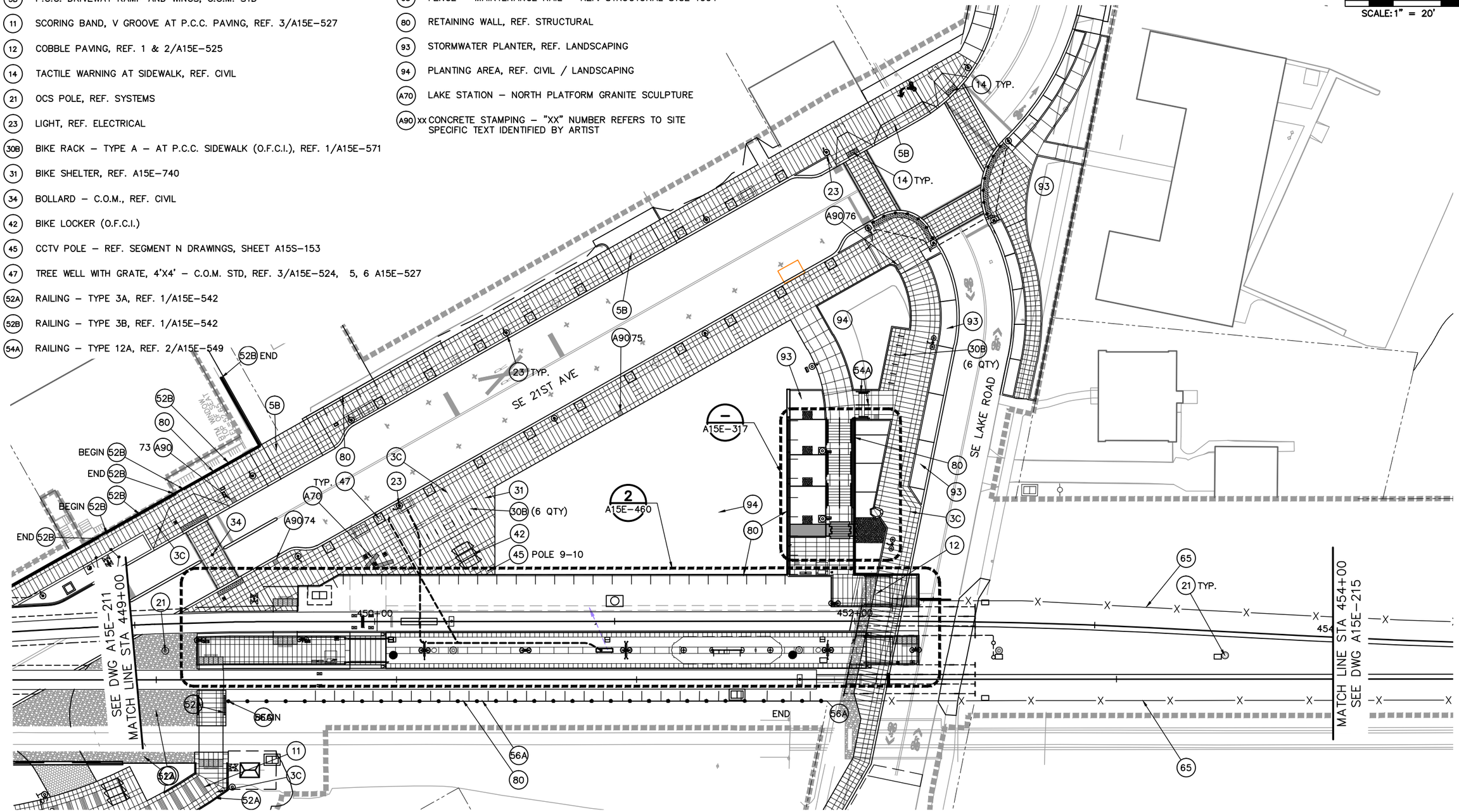


Station Platform Column Art Installation

Exhibit P 18

ARCHITECTURAL KEYNOTES

- 3C P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
- 5B P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD
- 11 SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
- 12 COBBLE PAVING, REF. 1 & 2/A15E–525
- 14 TACTILE WARNING AT SIDEWALK, REF. CIVIL
- 21 OCS POLE, REF. SYSTEMS
- 23 LIGHT, REF. ELECTRICAL
- 30B BIKE RACK – TYPE A – AT P.C.C. SIDEWALK (O.F.C.I.), REF. 1/A15E–571
- 31 BIKE SHELTER, REF. A15E–740
- 34 BOLLARD – C.O.M., REF. CIVIL
- 42 BIKE LOCKER (O.F.C.I.)
- 45 CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S–153
- 47 TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
- 52A RAILING – TYPE 3A, REF. 1/A15E–542
- 52B RAILING – TYPE 3B, REF. 1/A15E–542
- 54A RAILING – TYPE 12A, REF. 2/A15E–549
- 56A RAILING – TYPE 7A, REF. 1/A15E–550
- 65 FENCE – MAINTENANCE RAIL – REF. STRUCTURAL S15E 1004
- 80 RETAINING WALL, REF. STRUCTURAL
- 93 STORMWATER PLANTER, REF. LANDSCAPING
- 94 PLANTING AREA, REF. CIVIL / LANDSCAPING
- A70 LAKE STATION – NORTH PLATFORM GRANITE SCULPTURE
- A90 XX CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06–01–11 DATE
JFC DRAWN	06–01–11 DATE
TLC CHECKED	11–03–11 DATE
APPROVED	5–14–12 DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT CAROL ANNE REED OREGON PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5–14–12		5–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 1
ARCHITECTURAL
SITE PLAN (MILWAUKIE/MAIN STREET STATION)
STA 449+00 TO STA 454+00

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	A15E–213	RH100544JB	

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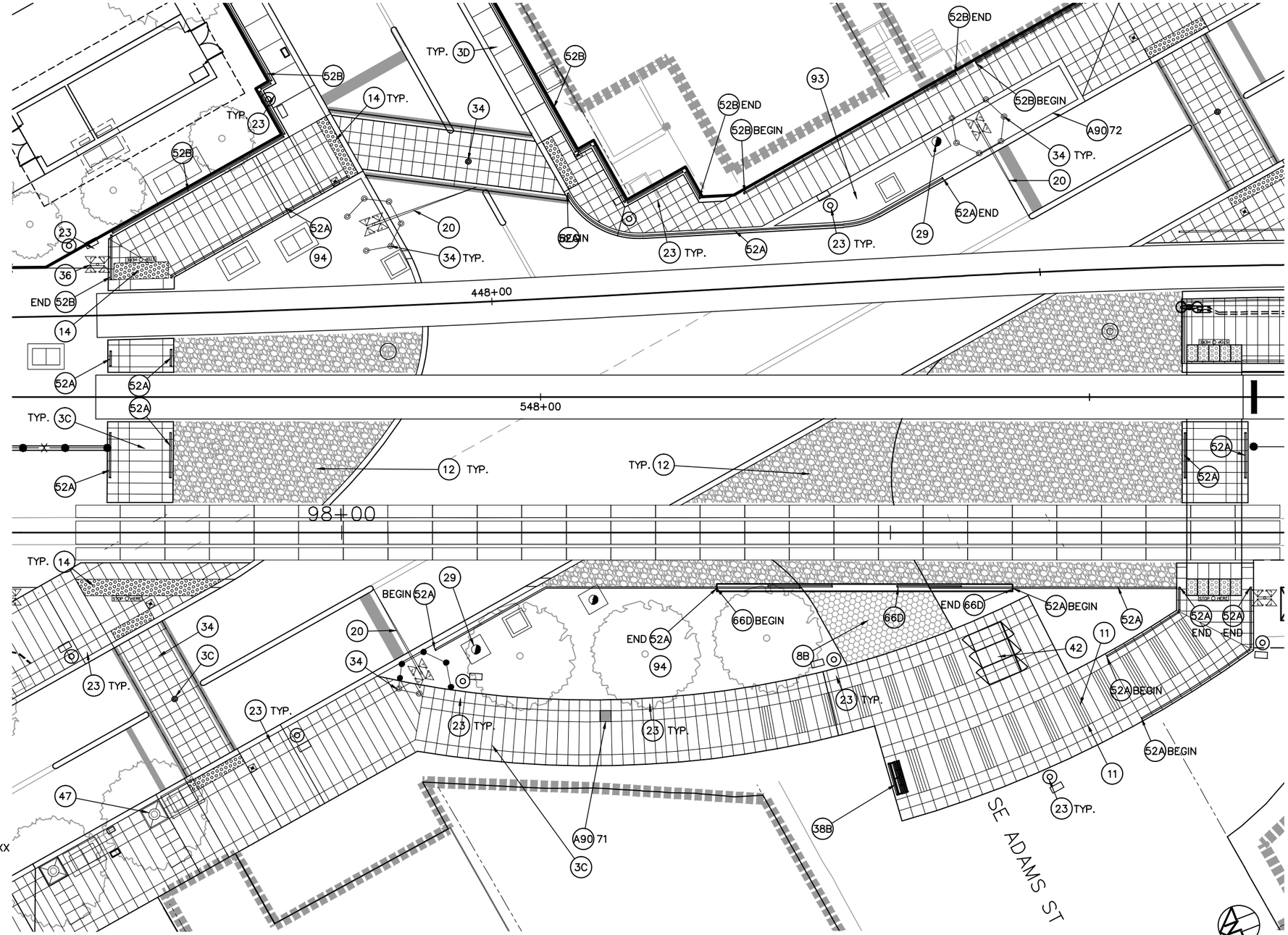
ARCHITECTURAL KEYNOTES

- (3C) P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
- (3D) P.C.C. SIDEWALK. SCORING PER PLANS
- (8B) FLEXIBLE POROUS PAVING, REF. 1/A15E–526
- (11) SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
- (12) COBBLE PAVING, REF. 1 & 2/A15E–525
- (14) TACTILE WARNING AT SIDEWALK, REF. CIVIL
- (20) CROSSING GATE, REF. CIVIL
- (21) OCS POLE, REF. SYSTEMS
- (23) LIGHT, REF. ELECTRICAL
- (29) TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
- (34) BOLLARD – C.O.M., REF. CIVIL
- (36) PEDESTRIAN WARNING DEVICE, REF. ELEC.
- (38B) BENCH – TYPE A – C.O.M. STD. (O.F.C.I), REF. 1/A15E–572
- (42) BIKE LOCKER (O.F.C.I.)
- (47) TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
- (52A) RAILING – TYPE 3A, REF. 1/A15E–542
- (52B) RAILING – TYPE 3B, REF. 2/A15E–542
- (60B) FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. X/A15E–XXX
- (66D) GATE – FIRE ACCESS, REF. 1/A15E–547
- (93) STORMWATER PLANTER, REF. LANDSCAPING
- (94) PLANTING AREA, REF. CIVIL / LANDSCAPING
- (A90) xx CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



ENLARGED PLANS – SE ADAMS STREET (1)
SCALE: 1" = 10'–0"

SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
5	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06–01–11	DATE
JFC DRAWN	06–01–11	DATE
TLC CHECKED	11–03–11	DATE
APPROVED	5–14–12	DATE

REGISTERED CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT
PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 2
ARCHITECTURAL
ENLARGED PLAN
SE ADAMS ST

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	1"=10'	A15E–316	RH100544JB	

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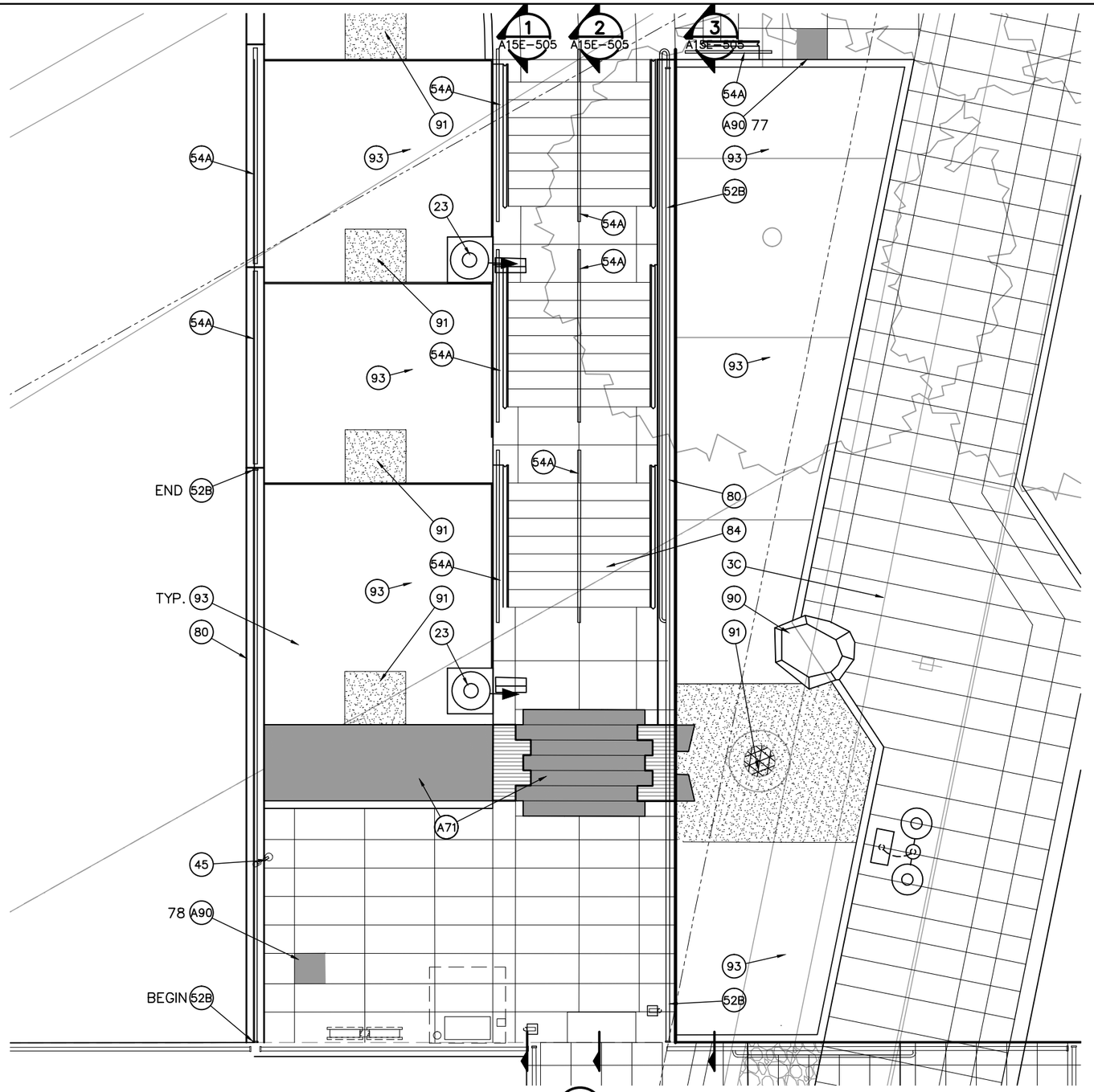

ENLARGED PLANS – SE LAKE ROAD (1)
SCALE: 1/4" = 1'-0"

ARCHITECTURAL KEYNOTES

- (3C) P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E-524
- (23) LIGHT, REF. ELECTRICAL
- (45) CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S-153
- (52A) RAILING – TYPE 3A, REF. 1/A15E-542
- (52B) RAILING – TYPE 3B, REF. 1/A15E-542
- (54A) RAILING – TYPE 12A, REF. 2/A15E-549
- (80) RETAINING WALL, REF. STRUCTURAL
- (84) P.C.C. STEPS WITH HANDRAIL, REF. 2/A15E-549 FOR HANDRAIL, REF. STRUCTURAL FOR STEPS
- (90) GRANITE BOULDER, REF. 7/A15E-526
- (91) AGGREGATE SPLASH PAD
- (93) STORMWATER PLANTER, REF. LANDSCAPING
- (A71) LAKE STATION – SOUTH PLATFORM GRANITE SCULPTURE
- (A90) xx CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	XXX		XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED 06-01-11 DATE
JFC DRAWN 06-01-11 DATE
TLC CHECKED 11-03-11 DATE
APPROVED 5-14-12 DATE

REGISTERED 82 CAROLYN TYER-REED OREGON LANDSCAPE ARCHITECT
PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ENLARGED PLAN
SE LAKE RD

Exhibit T 3

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	1/4"=1'-0"	A15E-317	RH100544JB	

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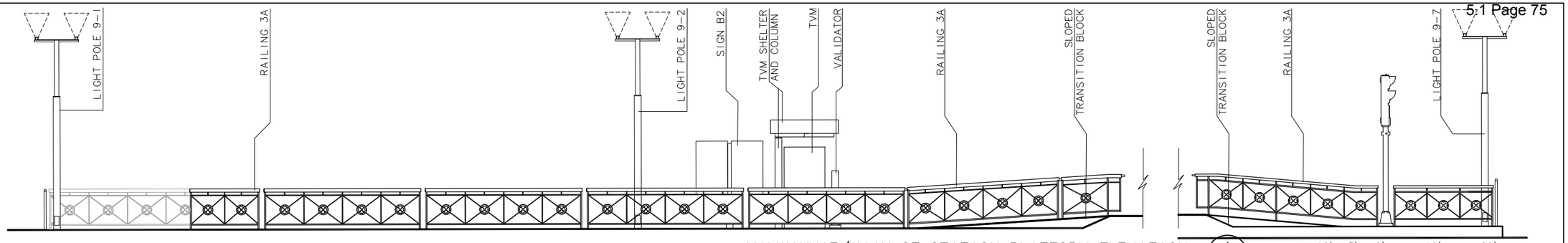
Mar 20, 2012 10:37am CJ
RHeiden

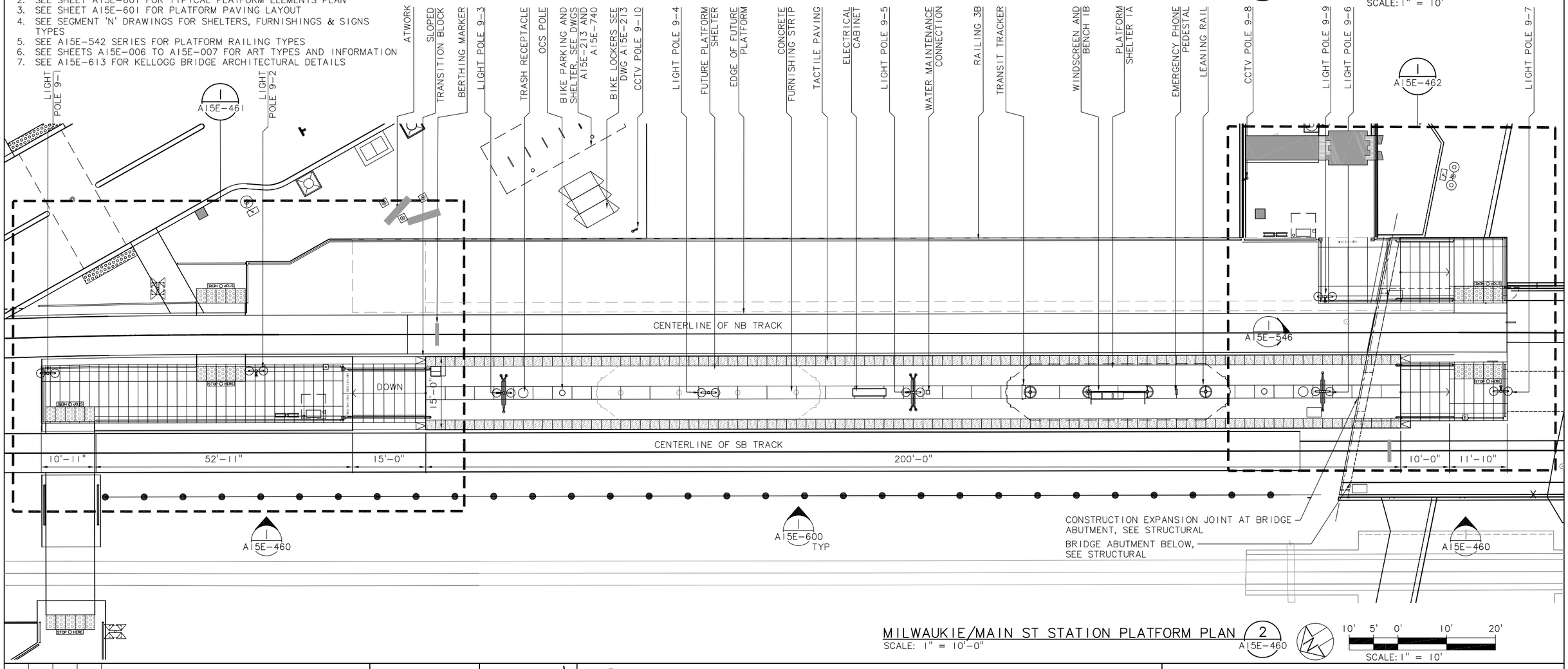


MILWAUKIE/MAIN ST STATION PLATFORM ELEVATION
SCALE: 1" = 10'-0"

1 / A15E-460

10' 5' 0' 10' 20'
SCALE: 1" = 10'

GENERAL NOTES:
1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM ELEMENTS PLAN
3. SEE SHEET A15E-601 FOR PLATFORM PAVING LAYOUT
4. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGNS TYPES
5. SEE A15E-542 SERIES FOR PLATFORM RAILING TYPES
6. SEE SHEETS A15E-006 TO A15E-007 FOR ART TYPES AND INFORMATION
7. SEE A15E-613 FOR KELLOGG BRIDGE ARCHITECTURAL DETAILS



MILWAUKIE/MAIN ST STATION PLATFORM PLAN
SCALE: 1" = 10'-0"

2 / A15E-460

10' 5' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11 DATE
MH DRAWN	5-20-11 DATE
MH CHECKED	3-08-12 DATE
APPROVED	5-14-12 DATE

REGISTERED ARCHITECT JON C. STYNER PORTLAND, OREGON STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, Interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

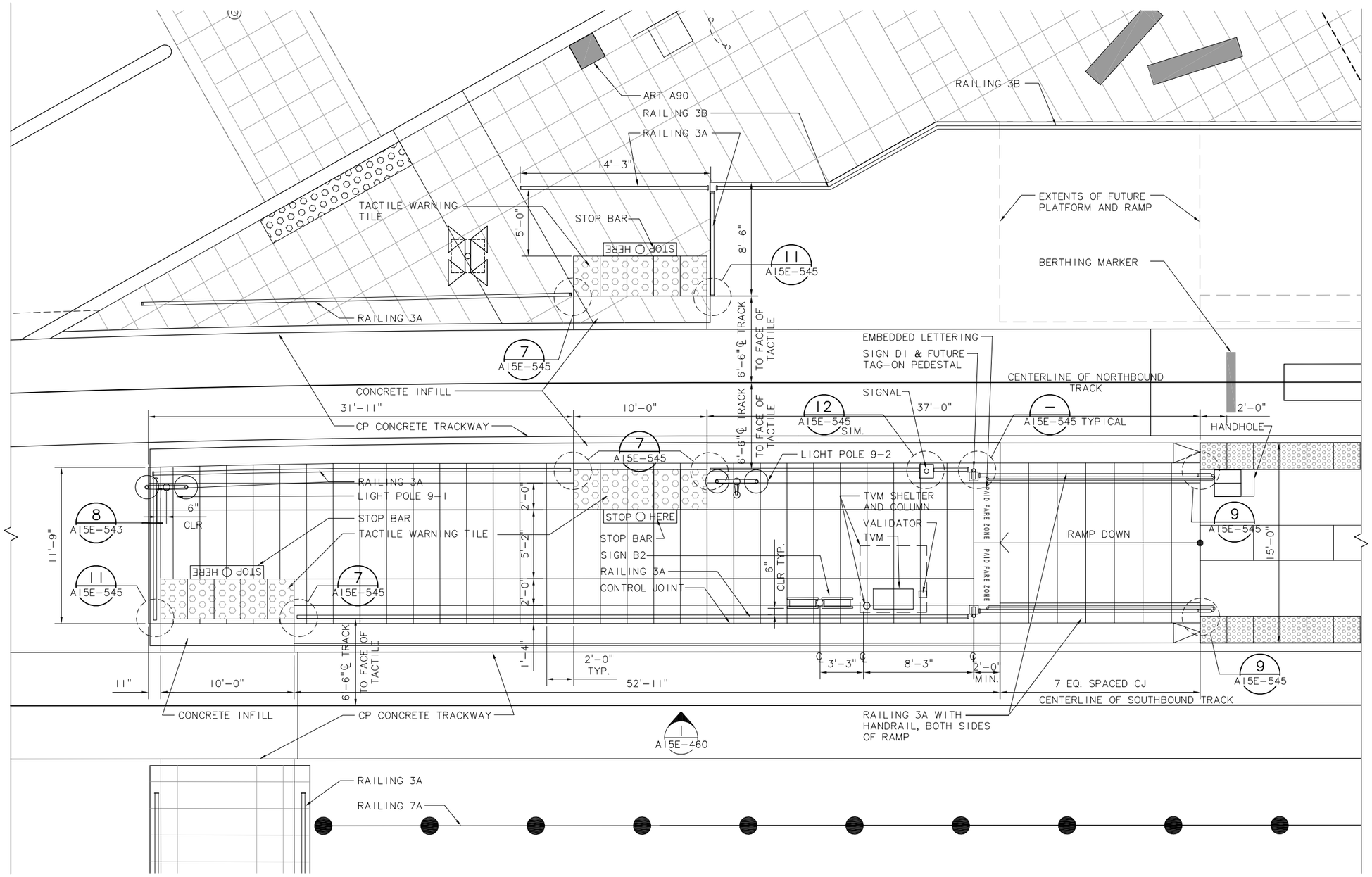
SUBMITTED:	DATE: 5-14-12	APPROVED:	DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
Exhibit T 4
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
PLATFORM PLAN AND ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 10'-0"	A15E-460	RH100544JB	

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\400_Segment D\A15E-460.dwg Mar. 20, 2012 - 9:40 AM meredith hendricks
Plot Date:3/20/2012 9:44 AM meredith hendricks

GENERAL NOTES:
1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION AND PLAN
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM DETAILS
3. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGN TYPES
4. SEE SHEETS A15E-004 AND A15E-542 SERIES FOR PLATFORM RAILING TYPES
5. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION
6. SEE TRAFFIC DRAWINGS FOR STOP BAR AND PEDESTRIAN SIGNAL INFORMATION
7. SEE SYSTEMS DRAWINGS FOR HANDHOLES AND VAULT INFORMATION
8. SEE CIVIL DRAWINGS FOR PRECAST CONCRETE CROSSING PANEL
9. SEE TRAFFIC DRAWINGS AND SYSTEMS DRAWINGS FOR SIGNALS



NORTH END ENLARGED PLATFORM PLAN

SCALE: 1/4"=1'-0"

1 / A15E-461

4' 2' 0' 4' 8'

SCALE: 1/4" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
MH DRAWN	03-07-12	DATE
MH CHECKED	3-07-12	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. PTTNER PORTLAND, OREGON STATE OF OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

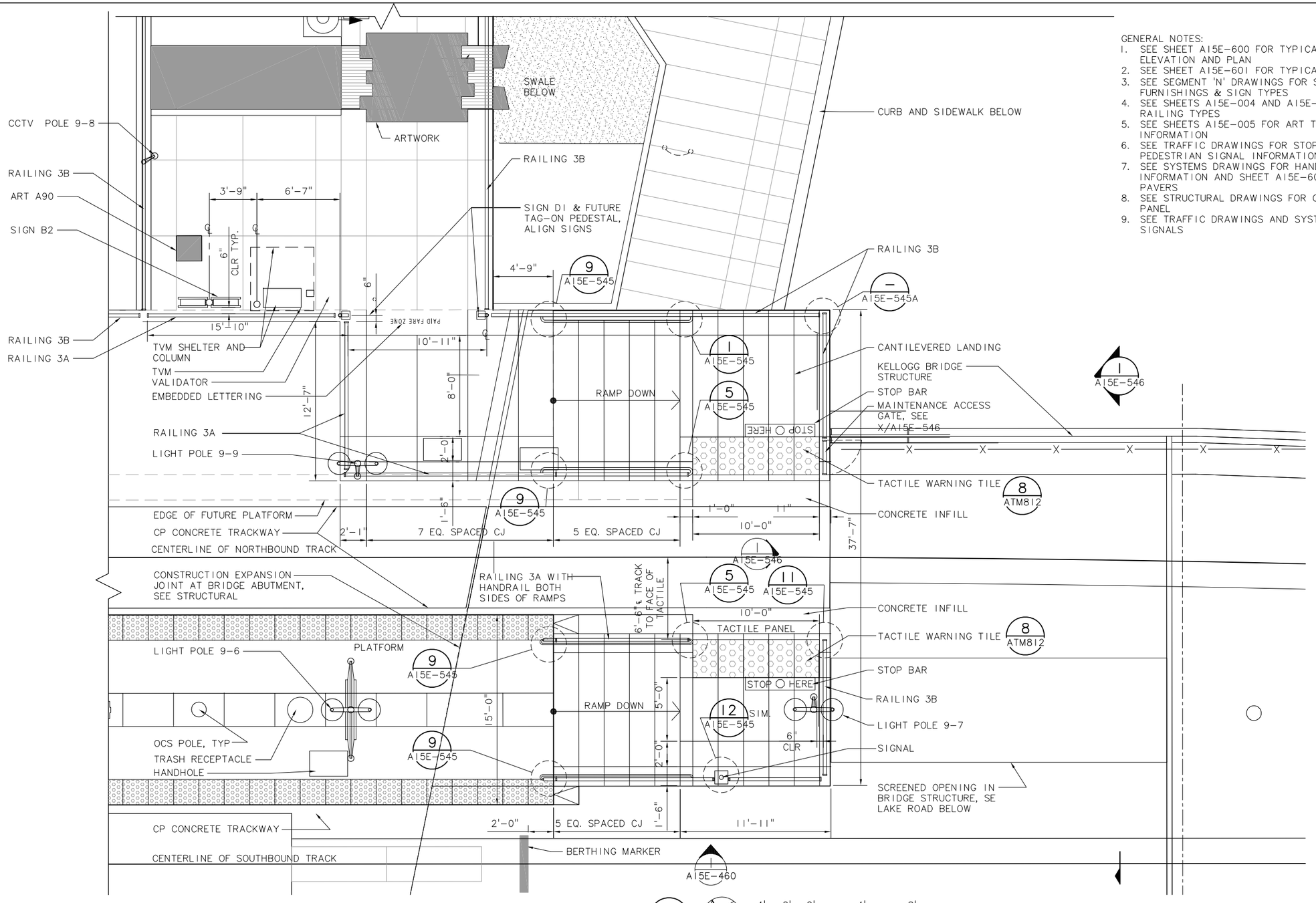
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
Exhibit T 5
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
ENLARGED PLATFORM END PLAN

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1/4"=1'-0"	A15E-461	RH100544JB	

GENERAL NOTES:
1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION AND PLAN
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM DETAILS
3. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGN TYPES
4. SEE SHEETS A15E-004 AND A15E-542 FOR PLATFORM RAILING TYPES
5. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION
6. SEE TRAFFIC DRAWINGS FOR STOP BAR AND PEDESTRIAN SIGNAL INFORMATION
7. SEE SYSTEMS DRAWINGS FOR HANDHOLES AND VAULT INFORMATION AND SHEET A15E-601 FOR LOCATION AT PAVERS
8. SEE STRUCTURAL DRAWINGS FOR CONCRETE CROSSING PANEL
9. SEE TRAFFIC DRAWINGS AND SYSTEMS DRAWINGS FOR SIGNALS



SOUTH END ENLARGED PLATFORM PLAN
SCALE: 1/4"=1'-0"

1 A15E-462

4' 2' 0' 4' 8'
SCALE: 1/4" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	03-26-12				ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
MH DRAWN	3-02-12	DATE
MH CHECKED	3-02-12	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. STYNER PORTLAND, OREGON STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

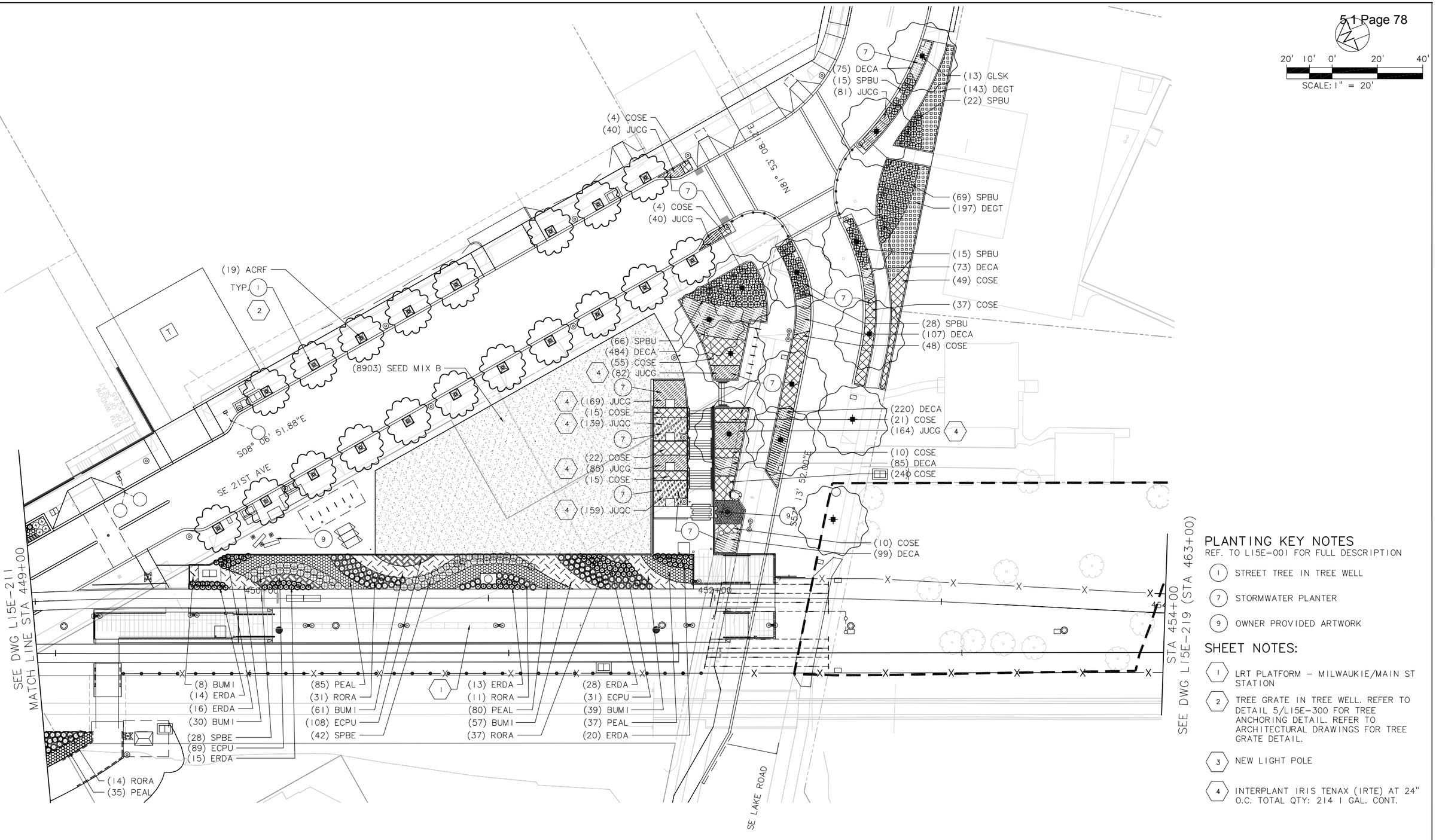
SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
ENLARGED PLATFORM END PLAN

Exhibit T 6

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1/4"=1'-0"	A15E-462	RH100544JB	

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\400_Segment D\A15E-462.dwg Mar. 20, 2012 - 12:16 PM meredith hendricks
Plot Date:3/20/2012 12:17 PM meredith hendricks



PLANTING KEY NOTES

REF. TO LI5E-001 FOR FULL DESCRIPTION

1. STREET TREE IN TREE WELL
7. STORMWATER PLANTER
9. OWNER PROVIDED ARTWORK

SHEET NOTES:

1. LRT PLATFORM – MILWAUKIE/MAIN ST STATION
2. TREE GRATE IN TREE WELL. REFER TO DETAIL 5/LI5E-300 FOR TREE ANCHORING DETAIL. REFER TO ARCHITECTURAL DRAWINGS FOR TREE GRATE DETAIL.
3. NEW LIGHT POLE
4. INTERPLANT IRIS TENAX (IRTE) AT 24" O.C. TOTAL QTY: 214 1 GAL. CONT.

3-26-12	TS	MF	ISSUED FOR CONSTRUCTION	

SK DESIGNED	05-03-11 DATE
CM/AP DRAWN	10-19-11 DATE
TS CHECKED	11-01-11 DATE
APPROVED	3-26-12 DATE

REGISTERED LANDSCAPE ARCHITECT
242
F. MICHAEL FAHA
12/31/1988
OREGON
PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

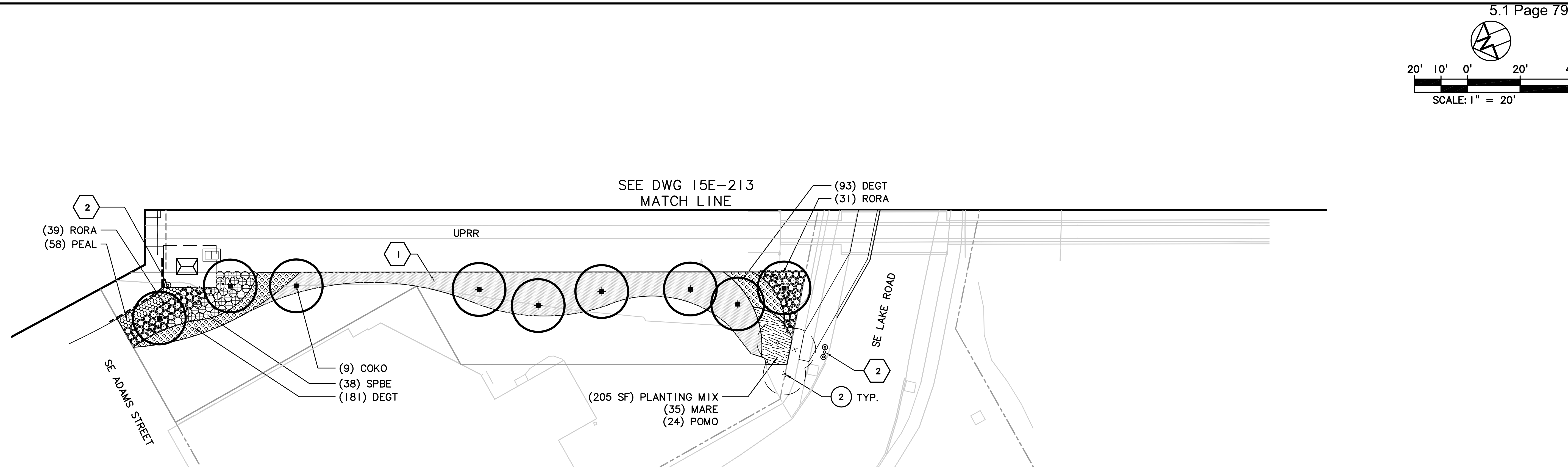
TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	3-26-12		3-26-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING PLAN
STA 449+00 TO STA 454+00

Exhibit T 7

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	LI5E-213	RH100544JB	



PLANTING KEY NOTES

REF. TO L15E-001 FOR FULL DESCRIPTION

2 PRESERVE EXISTING TREES

SHEET NOTES:

1 BARK MULCH, AS SPECIFIED

2 LIGHT POLE

\\Gw01\public\Projects\10116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\D- Milwaukie\L15E-214.dwg Apr. 20, 2012 - 1:07 PM shawn kummer
Plot Date: 4/20/2012 3:23 PM_shawn kummer

05-14-12	TS	MF	ISSUED FOR CONSTRUCTION

SK (DESIGNED)	05-03-11 (DATE)
CM/AP (DRAWN)	10-19-11 (DATE)
TS (CHECKED)	04-17-12 (DATE)
(APPROVED)	05-14-12 (DATE)

REGISTERED LANDSCAPE ARCHITECT — OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC.

TRI MET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: — DATE: 05-14-12 — APPROVED: — DATE: 05-14-12

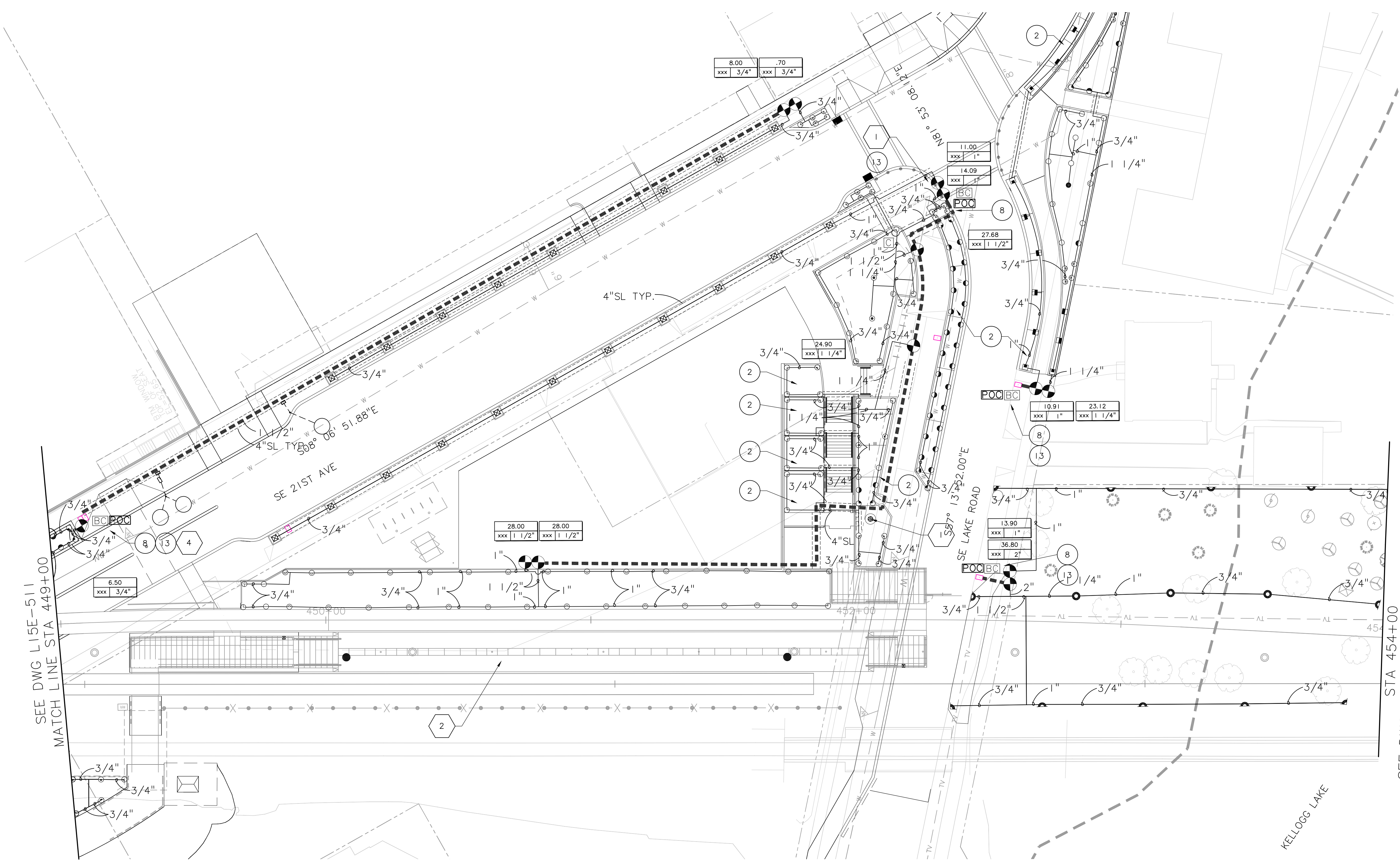
PORTLAND TO MILWAUKIE LRT

EAST SEGMENT

Exhibit T 8

LANDSCAPE
PLANTING PLAN
STA 449+00 TO STA 454+00

SCALE: 1"=20' — DRAWING NO.: L15E-214 — CONTRACT NO.: RH100544JB — SHEET NO.:



IRRIGATION KEY NOTES

REF. TO L15E-015 FOR FULL DESCRIPTION

- (2) STORMWATER PLANTER
- (8) BATTERY OPERATED CONTROLLER
- (13) WATER METER – REFER TO UTILITY DRAWINGS FOR METER LOCATION AND INSTALLATION

SHEET NOTES:

1. STORMWATER TREATMENT DRAIN
2. LRT PLATFORM – MILWAUKIE/MAIN ST. STATION
3. TWO WATER METERS TO BE ADDED TO THIS LOCATION.
4. WATER METER TO BE LOCATED IN PLANTING AREA.

3-26-12	MF/DE	MF	ISSUED FOR CONSTRUCTION

RT (DESIGNED)	12-19-11 (DATE)
AS/DD (DRAWN)	12-19-11 (DATE)
MF/DE (CHECKED)	(DATE)
(APPROVED)	3-26-12 (DATE)

REGISTERED LANDSCAPE ARCHITECT – F. MICHAEL FAHA – OREGON – PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET – CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT

EAST SEGMENT

LANDSCAPE IRRIGATION PLAN

STA 449+00 TO STA 454+00

Exhibit T 9

SUBMITTED:	DATE: 3-26-12	APPROVED:	DATE: 3-26-12	SCALE: 1"=20'	DRAWING NO.: L15E-513	CONTRACT NO.: RH100544JB	SHEET NO.:

\\Gw01\public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\Irrigation\L15E-513.dwg Mar. 20, 2012 - 1:16 PM shawn kummer
Plot Date:3/20/2012 1:30 PM_shawn kummer

GENERAL PLANTING NOTES

1. REFER TO DRAWING NOS. L15E-002 THROUGH L15E-013 FOR PLANTING LEGENDS AND QUANTITIES.
2. REFER TO DRAWING L15E-014 FOR PLANTING SHEET LAYOUT INDEX.
3. REFER TO DRAWING NOS. L15E-300 THROUGH L15E-302, AND TRIMET DIRECTIVE DRAWINGS LTM301 AND LTM302 FOR LANDSCAPE DETAILS.
4. NUMBERS IN CIRCLES ((#)) REFER TO PLANTING KEY NOTES. NUMBERS IN HEXAGONS (⟨#⟩) REFER TO PLANTING SHEET NOTES.
5. INDIVIDUAL TEXT SYMBOL CALLOUTS ON PLAN SHEETS REFER TO PLANT SPECIES SHOWN IN LEGENDS ON SHEETS L15E-002 THROUGH L15E-007. TEXT SYMBOL CALLOUTS ARE PROVIDED FOR EACH CONTIGUOUS CLUSTER OF SIMILAR PLANTINGS PER SHEET. SOME PLANTING AREAS RECEIVE ONLY ONE TEXT SYMBOL CALLOUT PER SPECIES, PER CONTIGUOUS PLANTING AREA FOR OVERALL LEGIBILITY PER SHEET.
6. CONTRACTOR MUST FIELD VERIFY ALL EXISTING TREES IN FIELD PRIOR TO CONSTRUCTION ACTIVITIES. ALL EXISTING TREES NOT SHOWN IN CIVIL DEMO PLANS AS REMOVED ARE TO BE PROTECTED AND PRESERVED IN PLACE. REFER TO SPECIFICATION SECTION 01535 FOR TREE PRESERVATION AND PROTECTION AND EXISTING TREE PROTECTION DETAIL ON L15E-303.
7. REFER TO SPECIFICATION SECTION 32 93000 FOR LANDSCAPE PLANTINGS.
8. CONTRACTOR SHALL PROVIDE TOPSOIL, SOIL AMENDMENTS, AND COMPOST IN REQUIRED QUANTITIES TO CREATE THE PLANTING SOIL FOR PLANTED AND SEEDED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS AS PART OF THE CONSTRUCTION DOCUMENTATION PACKAGE. 12" DEPTH PLANTING SOIL AS SPECIFIED IN SPECIFICATION SECTION 32 93000 IS REQUIRED FOR ALL TREE AND SHRUB PLANTING AREAS (EXCEPT FOR STORMWATER FACILITIES), AND 6" DEPTH OF PLANTING SOIL FOR ALL SEEDED AREAS SHOWN ON LANDSCAPE PLANS.
9. 18" DEPTH STORMWATER FACILITY TOPSOIL, AS SPECIFIED IN SPECIFICATION SECTION 32 93000, IS REQUIRED FOR ALL STORMWATER FACILITIES, INCLUDING SWALES, PLANTERS, AND BASINS. REFER TO CIVIL DRAWINGS FOR STORMWATER FACILITY DETAILS.
10. ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENT PACKAGE.
11. QUANTITIES ARE LISTED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION. IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND.
12. INSTALL AND MAINTAIN TREES FURNISHED BY TRIMET ("OWNER-FURNISHED TREES"). SEE PLANTING LEGENDS FOR SPECIES AND QUANTITIES THAT WILL BE PROVIDED. COORDINATE DELIVERY AND RECEIPT THROUGH RESIDENT ENGINEER (RE).
13. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND ROUTING OF EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING EXCAVATION. REPAIR ONLY DAMAGE TO EXISTING PIPES, UTILITIES, OR RELATED FACILITIES AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY THE ENGINEER.
14. ADJUST PLANT LOCATIONS SO THAT VEGETATION DOES NOT CONFLICT WITH ABOVE-GROUND UTILITIES, OR WITH TRAFFIC SIGHT LINES, SIGNS, OR OTHER APPURTENANCES.
15. PRESERVE, PROTECT, AND MAINTAIN ALL IMPROVEMENTS WITHIN WORK AREAS, INCLUDING EXISTING TREES AND VEGETATION. THOROUGHLY CLEAN ALL IMPROVEMENTS AFTER COMPLETION OF WORK.
16. PROVIDE 12" ROOT BARRIER WHERE TREES ARE WITHIN 6' OF PAVED SURFACES, CURBS, OR WALLS, AND IN ALL TREE WELLS, UNLESS OTHERWISE REQUIRED BY APPLICABLE JURISDICTIONS, OR AS INDICATED ON PLANS. REFER TO DETAIL 4, SHEET L15E-300. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND.
17. ALL TREES TO BE BALLED AND BURLAPPED (B&B), UNLESS OTHERWISE INDICATED IN LEGEND OR IN DRAWINGS.
18. REFER TO DEMOLITION DRAWINGS FOR TREES TO BE REMOVED.
19. CONTRACTOR SHALL PROVIDE MULCH FOR PLANTED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.
20. ALL PLANTINGS LOCATED IN CITY OF PORTLAND RIGHT-OF-WAY WILL BE HAND-WATERED DURING THE 2-YEAR ESTABLISHMENT PERIOD. REFER TO IRRIGATION DRAWINGS FOR WATERING REQUIREMENTS IN ALL OTHER PLANTING AREAS OF THE PROJECT.
21. ALL TREES THAT ARE LOCATED IN SEEDED AREAS OR WHERE NO PLANTING IS SHOWN SHALL RECEIVE A 5' DIAMETER BARK MULCH RING, AT 3" DEPTH.

PLANTING KEY NOTES

(1) STREET TREE IN TREE WELL – REFER TO TRIMET DIRECTIVE DRAWING 5, SHEET LTM301 FOR TREE STAKING AND PLANTING. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND. REFER TO DETAIL 3, SHEET L15E-300 FOR ROOT BARRIER DETAIL. INSTALL TREE GRATE AND ROOTBALL ANCHOR SYSTEM AT LOCATIONS INDICATED ON PLANS. REFER TO ARCH DRAWINGS FOR TREE GRATE DETAILS. REFER TO DETAIL 5, SHEET L15E-300 FOR ROOTBALL ANCHOR SYSTEM DETAIL.

(2) PRESERVE EXISTING TREE – PRIOR TO CONSTRUCTION, INSTALL 4' HEIGHT ORANGE PLASTIC CONSTRUCTION FENCING AROUND EXISTING TREES AS INDICATED ON PLANS. TREE PROTECTION FENCING SHALL BE LOCATED AROUND EACH TREE AT THE DRIPLINE, OR AT 8' DIAMETER MINIMUM. SECURE FENCING TO STEEL POSTS PLACED 6' O.C. WITH PLASTIC TIES. REFER TO SPECIFICATION SECTION 01535 – TREE AND PLANT PROTECTION.

(3) VINE PLANTING AT WALL – REFER TO DETAIL 1, SHEET L15E-300 FOR VINE PLANTING IN PLANTING AREAS, AND DETAIL 5, SHEET L15E-300 FOR VINE PLANTINGS IN PAVING.

(4) MITIGATION PLANTING – REFER TO L15E-700 SERIES SHEETS FOR MITIGATION PLANTING PLANS AND DETAILS.

(5) WATER QUALITY SWALE – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY SWALES LOCATED WITHIN RIGHT-OF-WAY.

(6) WATER QUALITY BASIN – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY BASINS LOCATED WITHIN RIGHT-OF-WAY.

(7) STORMWATER PLANTER – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 THROUGHOUT FACILITY UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY PLANTERS LOCATED WITHIN RIGHT-OF-WAY.

(8) EXISTING LANDSCAPE TO REMAIN – PRESERVE AND PROTECT LANDSCAPE ON PRIVATE PROPERTY. REFER TO SPECIFICATION SECTION 01535 FOR TREE AND PLANT PROTECTION.

(9) OWNER-PROVIDED ARTWORK – REFER TO ARCH. DRAWINGS FOR LOCATIONS.

DETAIL REFERENCES

PLANTING DETAILS APPLY TO ALL PLANTS SHOWN ON LEGENDS AND LAYOUT SHEETS AS FOLLOWS:

TREE PLANTING AND STAKING	5 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES LESS STEEP THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
TREE PLANTING ON SLOPE	6 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING BED GRADING	1 / LTM302	TO ALL PROJECT PLANTING AREAS, EXCEPT FOR STORMWATER QUALITY FACILITIES
PLANTING	2 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES LESS STEEP THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING AT SLOPE	3 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
VINE PLANTING	1 / L15E-300	APPLIES TO ALL VINE PLANTINGS INSTALLED ON THE PROJECT AS SHOWN ON PLANS
VINE PLANTING IN PAVING	5 / L15E-300	APPLIES TO ALL VINE PLANTINGS INSTALLED IN PAVING AREAS ON THE PROJECDT AS SHOWN ON PLANS
PLANT SPACING	2 / L15E-300	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED IN ALL PROJECT PLANTING AREAS
ROOT BARRIER – TREES IN PLANTING STRIP	3 / L15E-300	APPLIES TO ALL TREE PLANTING AREAS ADJACENT TO PAVED AREAS, AS INDICATED ON PLANS AND IN GENERAL PLANTING NOTES
TREE PLANTING – ROOTBALL ANCHOR	4 / L15E-300	APPLIES TO TREE PLANTINGS LOCATED IN TREE WELLS WITH TREE GRATES AT LOCATIONS INDICATED ON PLANS.
PLANTING – 17TH AVE CORRIDOR ARTWORK	1 / L15E-302	APPLIES TO ALL SHRUBS AND GRASSES INSTALLED WITHIN AND AROUND OWNER-PROVIDED ARTWORK ALONG 17TH AVENUE
TYPICAL PLANT LAYOUT PER SPACING TYPE	1 / L15E-301	APPLIES TO ALL SHRUB AND GROUNDCOVER PLANTING AS REPRESENTED WITH HATCHES IN THE DRAWINGS.

3-26-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS (DESIGNED)	05-03-11 (DATE)
CM/AP (DRAWN)	08-10-11 (DATE)
SK/TS (CHECKED)	11-02-11 (DATE)
(APPROVED)	3-26-12 (DATE)

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: 3-26-12 | APPROVED: | DATE: 3-26-12

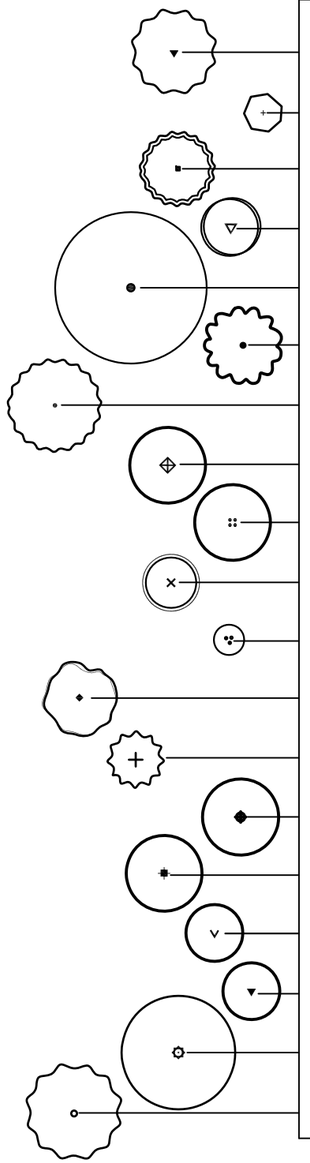
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING NOTES

Exhibit T 10

SCALE: 1"=20' | DRAWING NO.: L15E-001 | CONTRACT NO.: RH100544JB | SHEET NO.:

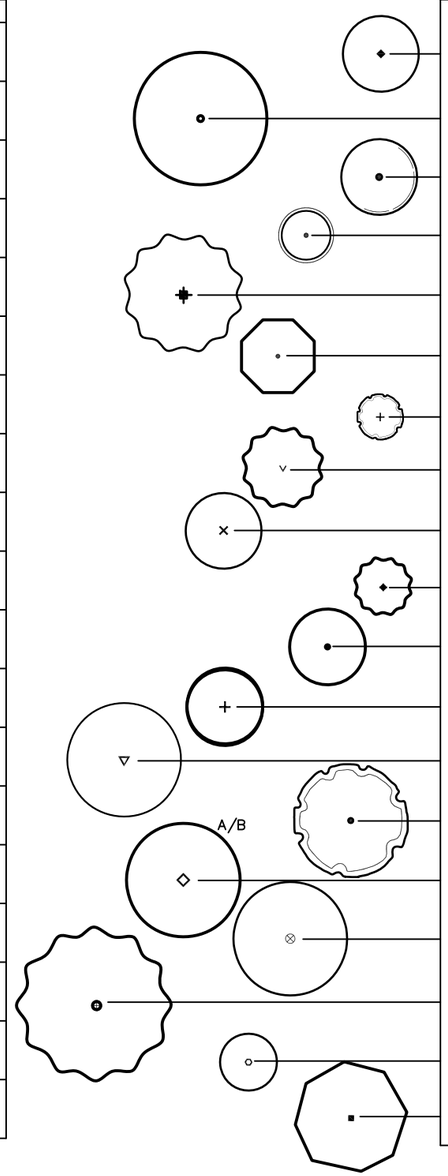
\\Gw01\public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\General\L15E-001.dwg Feb. 22, 2012 - 5:25 PM shown kummer
Plot Date:3/20/2012 1:10 PM_shown kummer

MASTER TREE LEGEND



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
ACCA	Acer campestre 'Evelyn'	QUEEN ELIZABETH HEDGE MAPLE	2 1/2" CAL.		7
ACCI	Acer circinatum	VINE MAPLE	7'-8',MULTI-STEM, 3 STEM MIN.	69	
ACGI	Acer ginnala 'Flame'	FLAME MAPLE	2 1/2" CAL., MULTI-STEM, 3 STEM MIN.		21
ACGR	Acer grandidentatum 'Schmidt'	ROCKY MOUNTAIN GLOW MAPLE	2 1/2" CAL.		9
ACMA	Acer macrophyllum	BIG LEAF MAPLE	2 1/2" CAL.		15
ACRF	Acer rubrum 'Franks Red'	RED SUNSET MAPLE	2 1/2" CAL.		26
ALRU	Alnus rubra	RED ALDER	2 1/2" CAL.		46
AMAL	Amelanchier alnifolia	SERVICEBERRY	2 1/2" CAL.		23
AMJF	Amelanchier laevis 'JFS-Arb' PP 15304	SPRING FLURRY SERVICEBERRY	2 1/2" CAL.		30
AMSN	Amelanchier laevis 'Snowcloud' PP 7203	SNOWCLOUD SERVICEBERRY	2 1/2" CAL.		16
ARME	Arbutus menziesii	PACIFIC MADRONE	5 GAL.	3	
BEPA	Betula papyrifera 'Renci' PP12768	RENAISSANCE REFLECTION PAPER BIRCH	2 1/2" CAL.		6
COSA	Cornus kousa 'Satomi'	SATOMI DOGWOOD	2" CAL.	2	
COEW	Cornus x 'Eddie's White Wonder'	EDDIE'S WHITE WONDER DOGWOOD	2 1/2" CAL.		26
COKO	Cornus kousa 'Chinensis'	KOUSA DOGWOOD	2 1/2" CAL.		3
CONU	Cornus nuttalli	PACIFIC DOGWOOD	5 GAL.	2	
FASY	Fagus sylvatica 'Fastigiata'	FASTIGIATE EUROPEAN BEECH	2 1/2" CAL.		23
FRLA	Fraxinus latifolia	OREGON ASH	2 1/2" CAL.		18
FRCI	Fraxinus pennsylvanica 'Cimmzam' PP8077	CIMMARON GREEN ASH	2 1/2" CAL.		30



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
FRRU	Fraxinus pennsylvanica 'Rugby'	PRAIRIE SPIRE GREEN ASH	2 1/2" CAL.		66
GIAU	Ginkgo biloba 'Autumn Gold'	AUTUMN GOLD GINKGO	2 1/2" CAL.		22
GIMG	Ginkgo biloba 'Magyar'	Magyar GINKGO	2" CAL.	18	
GIPR	Ginkgo biloba 'Princeton Sentry'	PRINCETON SENTRY GINKGO	2" CAL.		51
GLSK	Gleditsia triacanthos inermis 'Skyline'	SKYLINE HONEYLOCUST	2 1/2" CAL.		41
MAGA	Magnolia x 'Galaxy'	GALAXY MAGNOLIA	2" CAL.		70
MATR	Malus transitoria 'Schmidtcutleaf' Golden Raindrops	CUTLEAF CRABAPPLE	1 1/2" CAL.	14	
NYSY	Nyssa sylvatica	BLACK TUPELO	2 1/2" CAL.		102
PAPE	Parrotia persica	PERSIAN IRONWOOD	2 1/2 " CAL.		35
PRSA	Prunus sargentii 'Columnaris'	COLUMNAR SARGENT CHERRY	2 1/2" CAL.		10
PRVI	Prunus virginiana	CHOKECHERRY	2 1/2" CAL.		14
PRCA	Prunus virginiana 'Canada Red"	CANADA RED CHOKECHERRY	2 1/2" CAL.		26
QUFR	Quercus frainetto 'Schmidt'	FOREST GREEN OAK	2 1/2" CAL.	4	95
QUGM	Quercus gambelii	GAMBEL OAK	2 1/2" CAL.		1
QUGA	Quercus garryana	OREGON WHITE OAK	A= 2 1/2" CAL. B= 3" CAL.	1	5 25
QULO	Quercus lobata	VALLEY OAK	2 1/2" CAL.		1
ULJA	Ulmus japonica x wilsoniana 'Morton'	ACCOLADE ELM	2 1/2" CAL.		18
ZEMU	Zelkova serratta 'Mussashino'	MUSSASHINO COLUMNAR ZELKOVA	2 1/2" CAL.	25	
ZESE	Zelkova serrata 'Village Green'	VILLAGE GREEN ZELKOVA	2 1/2" CAL.		41

* CF = CONTRACTOR FURNISHED OF = OWNER FURNISHED

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION	

TS DESIGNED	05-03-11 DATE	
CM/AP DRAWN	08-10-11 DATE	
SK/TS CHECKED	11-02-11 DATE	
APPROVED	05-14-12 DATE	

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL HAHA 2988 OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS | DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	05-14-12		05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 11

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	L15E-002	RH100544JB	

MASTER TREE LEGEND CONT'D

CONIFEROUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
CADE	Calocedrus decurrens	INCENSE CEDAR	A=10-12' HT. B=14-16' HT.	7 119	
CHNO	Chamaecyparis nootkatensis 'Glauca Pendula'	WEEPING ALASKA CEDAR	15-18' HT.	33	
CUSE	Cupressus sempervirens	ITALIAN CYPRESS	12-14' HT.	26	
PSME	Pseudotsuga menziesii	DOUGLAS FIR	A=10-12' HT. B=14-16' HT.	33 30	
TADI	Taxodium distichum 'Mickelson'	SHAWNEE BRAVE BALD CYPRESS	14' -16' HT.	26	
THPL	Thuja plicata	WESTERN RED CEDAR	A=10-12' HT. B=14-16' HT.	64 49	
THPF	Thuja plicata 'Fastigiata'	HOGAN CEDAR	A=10-12' HT. B=14-16' HT.	78 76	
TSHE	Tsuga heterophylla	WESTERN HEMLOCK	A=10-12' HT. B=14-16' HT.		

* CF = CONTRACTOR FURNISHED, OF = OWNER FURNISHED

EXISTING TREES

EXISTING TREE TO BE PROTECTED AND PRESERVED - SEE SPECIFICATIONS SECTION 01535. SYMBOL SIZE DOES NOT NECESSARILY REFLECT ACCURATE EXISTING CANOPY SIZE IN FIELD. CONTRACTOR MUST FIELD VERIFY CANOPY EXTENTS AND ADHERE TO TREE PRESERVATION DETAIL PER APPLICABLE JURISDICTION.

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION		

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 11-02-11 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC. — TRI MET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 12

SUBMITTED: | DATE: 05-14-12 | APPROVED: | DATE: 05-14-12 | SCALE: 1"=20' | DRAWING NO.: L15E-003 | CONTRACT NO.: RH100544JB | SHEET NO.:

MASTER SHRUBS/GROUNDCOVER LEGEND

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
ABGR	Abelia x grandiflora 'Francis Mason'	FRANCIS MASON ABELIA	2 GAL.	AS SHOWN
ARUN	Arbutus unedo 'Compacta'	COMPACT STRAWBERRY TREE	5 GAL.	AS SHOWN
ARMA	Arctostaphylos uva–ursi 'Massachusetts'	MASSACHUSETTS KINNICKINNICK	1 GAL.	18" O.C.
ARUV	Arctostaphylos uva–ursi	KINNICKINNICK	1 GAL.	18" O.C.
ARWO	Arctostaphylos uva–ursi 'Woods Compacta'	WOOD'S COMPACT KINNICKINNICK	1 GAL.	18" O.C.
BEBU	Berberis buxifolia 'Nana'	BOXLEAF BARBERRY	1 GAL.	18" O.C.
BUMI	Buxus microphylla 'Green Gem'	GREEN GEM BOXWOOD	1 GAL.	24" O.C.
CAAC	Calamagrostis x acutiflora 'Avalanche'	AVALANCHE FEATHER REED GRASS	1 GAL.	18" O.C.
CAAO	Calamagrostis x acutiflora 'Overdam'	VARIEGATED REED GRASS	1 GAL.	18" O.C.
CARA	Campsis radicans 'Flava'	YELLOW TRUMPET VINE	5 GAL.	AS SHOWN STAKED
CAAL	Carex albula 'Frosty Curls'	FROSTY CURLS SEDGE	1 GAL.	18" O.C.
CABU	Carex buchananii	LEATHERLEAF SEDGE	1 GAL.	12" O.C.
CADN	Carex densa	DENSE SEDGE	1 GAL.	12" O.C.
CAIC	Caryopteris incana 'Sunshine Blue'	SUNSHINE BLUE CARYOPTERIS	1 GAL.	18" O.C.
CAGO	Carex morrowii 'Gold Band'	GOLD BAND JAPANESE SEDGE	1 GAL.	12" O.C.
CAMO	Carex morrowii 'Ice Dance'	ICE DANCE JAPANESE SEDGE	1 GAL.	12" O.C.
CAVA	Carex morrowii 'Variegata'	VARIEGATED JAPANESE SEDGE	1 GAL.	12" O.C.
CETH	Ceanothus thyrsifolia 'Victoria'	VICTORIA CALIFORNIA LILAC	2 GAL.	AS SHOWN
COSG	Cornus sanguinea	BLOODTWIG DOGWOOD	3 GAL.	36" O.C.
COSE	Cornus sericea 'Kelseyi'	DWARF RED–TWIG DOGWOOD	1 GAL.	24" O.C.
COST	Cornus stolonifera	RED–TWIG DOGWOOD	3 GAL.	AS SHOWN
COAF	Cornus stolonifera 'Arctic Fire'	ARCTIC FIRE DOGWOOD	5 GAL.	AS SHOWN
COLG	Cotoneaster adpressus 'Little Gem'	CREEPING LITTLE GEM COTONEASTER	1 GAL.	24" O.C.

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
CODA	Cotoneaster dammeri 'Lowfast'	LOWFAST BEARBERRY COTONEASTER	1 GAL.	24" O.C.
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.
ECPU	Echinacea purpurea 'Magnus'	MAGNUS PURPLE CONEFLOWER	1 GAL.	12" O.C.
ELAC	Eleocharis acicularis	DWARF HAIRGRASS	1 GAL.	12" O.C.
ELPA	Eleocharis palustris	CREEPING SPIKERUSH	1 GAL.	12" O.C.
EQHY	Equisetum hyemale	SCOURING RUSH	1 GAL.	12" O.C.
ERDA	Erica x darleyensis 'Kramer's Rote'	KRAMER'S ROTE WINTER HEATH	2 GAL.	AS SHOWN
EUCH	Euphorbia characias ssp. characias 'Humpty Dumpty'	HUMPTY DUMPTY EUPHORBIA	1 GAL.	18" O.C.
FEGL	Festuca glauca 'Boulder Blue'	BOULDER BLUE FESCUE	1 GAL.	12" O.C.
FEID	Festuca idahoensis	IDAHO BLUE FESCUE	1 GAL.	12" O.C.
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	12" O.C.
HESE	Helictotrichon sempervirens	BLUE OAT GRASS	1 GAL.	18" O.C.
HEPA	Hesperaloe parviflora 'Yellow'	YELLOW FALSE YUCCA	1 GAL.	24" O.C.
HODI	Holodiscus discolor	OCEAN SPRAY	5 GAL.	AS SHOWN
HYQU	Hydrangea quercifolia 'Pee Wee'	PEE WEE OAK LEAF HYDRANGEA	1 GAL.	AS SHOWN
ILCC	Ilex crenata 'Convexa'	CONVEXA JAPANESE HOLLY	1 GAL.	AS SHOWN
ILVO	Ilex vomitoria 'Stokes Dwarf'	STOKES DWARF YAUPON HOLLY	1 GAL.	AS SHOWN
IRTE	Iris tenax	OREGON IRIS	1 GAL.	12" O.C.
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION	

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REGISTERED LANDSCAPE ARCHITECT F. MICHAEL HAHA 2988 OREGON PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

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710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05–14–12 APPROVED: DATE: 05–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 13

SCALE: 1"=20' | DRAWING NO.: L15E–004 | CONTRACT NO.: RH100544JB | SHEET NO.:

MASTER SHRUBS/GROUNDCOVER LEGEND CONT'D

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
JUQC	Juncus effusus 'Quartz Creek'	SOFT RUSH	1 GAL.	12" O.C.
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.
JUCG	Juncus patens 'Carmen's Gray'	CARMEN'S GRAY RUSH	1 GAL.	12" O.C.
JUEB	Juncus patens 'Elk Blue'	ELK BLUE SPREADING RUSH	1 GAL.	12" O.C.
JUTE	Juncus tenuis	SLENDER RUSH	1 GAL.	12" O.C.
LEFO	Leucothoe fontanesiana 'Nana'	DWARF DROOPING LEUCOTHOE	2 GAL.	AS SHOWN
LIBB	Liriope muscari 'Big Blue'	BIG BLUE LIRIOPE	1 GAL.	12" O.C.
LIMU	Liriope muscari 'Evergreen Giant'	EVERGREEN GIANT LIRIOPE	1 GAL.	12" O.C.
LOIN	Lonicera involucrata	TWINBERRY	5 GAL.	AS SHOWN
LOPI	Lonicera pileata	BOXLEAF HONEYSUCKLE	1 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	24" O.C.
MACO	Mahonia aquifolium 'Compacta'	COMPACT OREGON GRAPE	2 GAL.	24" O.C.
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	AS SHOWN
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	18" O.C.
MYCA	Myrica californica	PACIFIC WAX MYRTLE	5 GAL.	AS SHOWN
NAFO	Narcissus 'Fortissimo'	FORTISSIMO DAFFODIL	3 BULBS	12" O.C.
PATR	Parthenocissus tricuspidata	BOSTON IVY	5 GAL.	AS SHOWN STAKED
PEAL	Pennisetum alopecuroides 'Hameln'	HAMELN PENNISETUM	1 GAL.	24" O.C.
PHLE	Philadelphus lewisii	MOCK ORANGE	5 GAL.	AS SHOWN
PHCA	Physocarpus capitatus	PACIFIC NINE BARK	5 GAL.	AS SHOWN

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	AS SHOWN
RHMA	Rhododendron macrophyllum	PACIFIC RHODODENDRON	5 GAL.	AS SHOWN
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	AS SHOWN
RORA	Rosa 'Radcor'	RAINBOW KNOCKOUT ROSE	3 GAL.	AS SHOWN
ROCS	Rosa 'Radsun'	CAREFREE SUNSHINE FLOWERING CARPET ROSE	1 GAL.	AS SHOWN
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	AS SHOWN
RUHI	Rudbeckia hirta 'Goldsturm'	GOLDSTURM BLACK-EYED SUSAN	1 GAL.	18" O.C.
SASC	Salix scouleriana	SCOULER'S WILLOW	6' MIN. HT.	36/100 SF
SALS	Salix scouleriana	SCOULER'S WILLOW	LIVE STAKES	5' O.C.
SARA	Sambucus racemosa	RED ELDERBERRY	3 GAL.	AS SHOWN
SPBE	Spiraea betulifolia 'Tor'	BIRCHLEAF SPIREA	1 GAL.	AS SHOWN
SPBU	Spiraea x bumalda 'Gold Flame'	GOLD FLAME SPIREA	1 GAL.	AS SHOWN
SPDE	Spiraea densiflora	ALPINE SPIREA	2 GAL.	24" O.C.
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	AS SHOWN
SPJA	Spiraea japonica 'Goldmound'	GOLDMOUND SPIREA	1 GAL.	AS SHOWN
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	24" O.C.
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	24" O.C.
VIDA	Viburnum davidii	DAVID VIBURNUM	2 GAL.	AS SHOWN
VIED	Viburnum edule	HIGHBUSH CRANBERRY	2 GAL.	AS SHOWN
VITI	Viburnum tinus 'Spring Bouquet'	SPRING BOUQUET VIBURNUM	5 GAL.	AS SHOWN

MASTER PLANTING MIXES LEGEND

MIX A

NOTES: WOODLAND UNDERSTORY MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	40%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	30%
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	30%

MIX B

NOTES: MAHONIA/SWORD FERN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	2' O.C.	GROUPS OF 5, 7, OR 9	60%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	2' O.C.	GROUPS OF 3, 5, OR 7	40%

MIX C

NOTES: UPLAND RIPARIAN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	27%
PICA	Physocarpus capitatus	PACIFIC NINE BARK	5 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	27%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	10%
SYAL	Symphoricarpos albus	SNOWBERRY	1 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	6%

MIX D

NOTES: STORMWATER ZONE A

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
CAOB	Carex obnupta	SLOUGH SEDGE	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	5%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	30%
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	25%

MIX E

NOTES: STORMWATER ZONE B

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
COST	Cornus stolonifera	RED-TWIG DOGWOOD	1 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	20%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	25%
MAAQ	Mahonia aquifolium	OREGON GRAPE	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	20%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	1 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	25%

MIX F

NOTES: DESCHAMPSIA/JUNCUS MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	50%
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.	GROUPS OF 3, 5, OR 7	50%

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION	

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 11-02-11 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT — OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12 APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 15

SCALE: 1"=20' | DRAWING NO.: L15E-006 | CONTRACT NO.: RH100544JB | SHEET NO.:

MASTER PLANTING MIXES LEGEND CONT'D

MIX G

NOTES: OAK MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
BADE	Balsamorhiza deltoidea	BALSAMROOT	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
BRCA	Bromus carinatus	CALIFORNIA BROME	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
FERO	Festuca roemeri	ROEMER'S FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FERU	Festuca rubra	RED FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
RAOC	Ranunculus occidentalis	WESTERN BUTTERCUP	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%

MIX H

NOTES: PLAZA MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
AQFO	Aquilegia formosa	RED COLUMBINE	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
ASSU	Aster subspicatus	DOUGLAS' ASTER	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
FEID	Festuca idahoensis	IDAHO FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
KOCR	Koehleria cristata	JUNE GRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
SIID	Sisyrinchium idahoense	BLUE-EYED GRASS	1 GAL.	18" O.C.	GROUPS OF 5, 7, OR 9	5%

SEED MIX A

NOTES: PERMANENT SEED MIX

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	1.5%	2 LBS./ 1,000 SF
Alyssum maritium	DWARF WHITE ALLYSSUM	2.5%	
Armeria maritima	SEA PINK	2%	
Bellis perennis	DWARF ENGLISH DAISY	1%	
Festuca ovina var. azay blue	AZAY BLUE SHEEP FESCUE	18%	
Festuca rubra var. sealink	SEALINK SLENDER CREEPING RED FESCUE	55%	
Limnanthes douglasii	DOUGLAS MEADOWFOAM	4%	
Nemophilia menziesii	BABY BLUE EYE'S	5%	
Trifolium fragiferum	STRAWBERRY CLOVER	8%	
Trifolium repens	MICRO CLOVER	3%	

SEED MIX B

NOTES: 1. PROTIME 705 PDX BY HOBBS & HOPKINS

2. PERCENTAGES OF SPECIES NOT AVAILABLE, ONLY AVAILABLE AS PROPRIETARY BLEND

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	N/A	1.5-2 LBS./ 1,000 SF
Festuca ovina duriuscula	HARD FESCUE	N/A	
Lobularia maritima	SWEET ALYSSUM	N/A	
Lolium perenne	DWARF PERENNIAL RYEGRASS	N/A	
Trifolium fragiferum	STRAWBERRY CLOVER	N/A	
Trifolium repens	MICRO CLOVER	N/A	

LANDSCAPE MATERIALS

	TYPE
BARK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 9300
ROUNDED RIVER ROCK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 9300

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Plot Date: 4/6/2012 4:51 PM_dance davison

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS (DESIGNED)	05-03-11 (DATE)
CM/AP (DRAWN)	08-10-11 (DATE)
SK/TS (CHECKED)	11-02-11 (DATE)
(APPROVED)	05-14-12 (DATE)

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL FAHA OREGON 1988 — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC. — TRIMET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12 APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 16

SCALE: 1"=20' DRAWING NO.: L15E-007 CONTRACT NO.: RH100544JB SHEET NO.:

ARCHITECTURAL PLAN NOTES

1. P.C.C. TRACKWAY, REF. CIVIL
2A. P.C.C. ROADWAY, HEAVY TINED FINISH
2B. P.C.C. ROADWAY, BLACK INTEGRAL COLOR
3A. P.C.C. SIDEWALK, PBOT STD, REF. 4/A15E–523
3B. P.C.C. SIDEWALK, ODOT STD, REF. 5/A15E–523
3C. P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
3D. P.C.C. SIDEWALK, SCORING PER PLANS
3E. P.C.C. SIDEWALK, OMSI STD, REF. 2/A15E–523
3F. P.C.C. SIDEWALK, PED./BIKE MIXING ZONE, SCORE AS SHOWN
3G. P.C.C. SIDEWALK, TACOMA STD, REF. 1 & 2/A15E–524
3H. P.C.C. SIDEWALK, SE PARK AVE STD, REF. 4/A15E–524
4. P.C.C. SIDEWALK, MATCH EXISTING FOR COLOR, SCORING AND FINISH
5A. P.C.C. DRIVEWAY RAMP AND WINGS, REF. CIVIL – SCORE PER PLANS
5B. P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD – SEE NOTE 14 THIS SHEET
6. A.C. PAVEMENT, REF. CIVIL
7. WHEEL STOPS, REF. CIVIL
8A. BASALT COBBLESTONE PAVING, REF 5/A15E–526
8B. FLEXIBLE POROUS PAVING, REF. 1/A15E–526
9. **PRECAST CONCRETE UNIT PAVERS – TYPE 3 – 8 CM, REF. 3/A15E–525**
10A. **PRECAST CONCRETE UNIT PAVERS – TYPE 1 – 6 CM, REF. 3/A15E–525**
10B. **PRECAST CONCRETE UNIT PAVERS – TYPE 2 – 6 CM, REF. 3/A15E–525**
11. SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
12. COBBLE PAVING, REF. 1 & 2/A15E–525
13. CROSSWALK STRIPING, REF. TRAFFIC
14. TACTILE WARNING AT SIDEWALK, REF. CIVIL
15. EXISTING SIDEWALK TO REMAIN, REF. CIVIL
16. BUS A.D.A. LOADING ZONE
17. P.C.C. GREENWAY – SCORING PER PLAN, REF. 1/A15E–523
18. P.C.C. BRIDGE PAVING – SCORING TO MATCH PMLRTB (WRTB) PLANS
19. P.C.C. GREENWAY PLAZA WITH INTEGRAL COLOR, REF. 3/A15E–301
20. CROSSING GATE, REF. CIVIL
21. OCS POLE, REF. SYSTEMS
22. JOINT USE POLE WITH LIGHTING, REF. SYSTEMS
23. LIGHT, REF. ELECTRICAL
24. UTILITY VAULT, REF. CIVIL
25. FIRE HYDRANT, REF. UTILITIES
26. S.S. BANDS, REF. 7/A15E–527
27. P.C.C. TRAFFIC MEDIAN, SCORE PER PLANS
28. GRAVEL, REF. CIVIL
29. TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
30A. **BIKE RACK – TYPE 1 AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E–571**
30B. **BIKE RACK – TYPE A – C.O.M. STD. AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E–571**
30C. **BIKE RACK – TYPE 1 AT CONCRETE PAVERS (O.F.C.I), REF. 2/A15E–571**
31. BIKE SHELTER, REF. A15E–740
31A. BIKE SHED, REF. A15E–750
32A. OMSI POLE LIGHT SHROUD – REF. A15E–500
32B. OMSI CABLE LIGHT SHROUD – REF. A15E–500
33A. **REMOVABLE TROLLEY TRAIL BOLLARD, REF. C15E–1600**
33B. **BASALT TROLLEY TRAIL BOLLARD, REF. C15E–1600**
34. BOLLARD – C.O.M., REF. CIVIL
35A. **REMOVABLE BOLLARD, REF. C15E–492**
35B. **REMOVABLE BOLLARD AT OLD WATER AVE., REF. 4/A15E–526**
36. PEDESTRIAN WARNING DEVICE, REF. ELEC.
37. TVM SHELTER (O.F.C.I), REF. SEGMENT N DRAWINGS
38A. **BENCH – TYPE 4 – (O.F.C.I)**
38B. **BENCH – TYPE A – C.O.M. STD., REF. 1/A15E–572**
38C. **BENCH – TYPE B – GABION BASKET SEATWALL, REF. 1/A15E–570**
38D. **BENCH – TYPE C – PORTLAND GREENWAY, REF. 4/A15E–572**
39. TRAFFIC BOLLARD WITH CHAIN, REF. 1/A15E–554
40A. **TRASH RECEPTACLE – TYPE A – C.O.M STD., REF. 2/A15E–572**
40B. **TRASH RECEPTACLE – TYPE 1 – (O.F.C.I.)**
42. **BIKE STORAGE LOCKER (O.F.C.I.)**
43. STREETCAR SHELTER (N.I.C.)
44. BUS STOP SHELTER (N.I.C.)
45. CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S–153
46A. NEW TREE WELL, 4'X4', REF. 3/A15E–524
46B. NEW TREE WELL, 4'X6', REF. 1 & 2/A15E–521 (SIM)
46C. NEW TREE WELL, 4'X9', REF. 1 & 2/A15E–521
46D. NEW TREE WELL, 6'–6"X9', REF. 3 & 4/A15E–521
47. TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
48. ADA CAST IRON TRENCH GRATE AT STORMWATER INLET, REF. CIVIL
49. OSPREY NESTING PLATFORM, REF. 1/A15E–504
50A. RAILING – TYPE 1A – 36" HT. PED. RAIL, REF. 1/A15E–542
50B. RAILING – TYPE 1B – 36" PAINTED PED. RAIL, REF. 1/A15E–542
50C. RAILING – TYPE 1C – 42" HT. PED. GUARDRAIL, REF. 1/A15E–542
51A. RAILING – TYPE 2A, REF. 1/A15E–541
51B. RAILING – TYPE 2B, REF. A15E–541
51C. RAILING – TYPE 2C, REF. A15E–540
52A. RAILING – TYPE 3A, REF. 1/A15E–542
52B. RAILING – TYPE 3B, REF. 1/A15E–542
53A. RAILING – TYPE 4A, REF. 1/A15E–542
53B. RAILING – TYPE 4B, REF. 1/A15E–542
54A. RAILING – TYPE 12A, REF. 1/A15E–549
54B. RAILING – HANDRAIL AT EXISTING SIDEWALK TYPE 12A, REF. 1/A15E–549
54C. RAILING – HANDRAIL AT BYBEE DECK TYPE 12A, REF. 4/A15E–549
55A. RAILING – PMLRTB PEDESTRIAN RAILING REF. A15E–551
55B. RAILING – PMLRTB PEDESTRIAN RAILING REF. A15E–552
56A. RAILING – TYPE 7A, REF. 1/A15E–550
57. RAILING – TYPE OMSI STREETCAR STATION, REF. A15E–553
58A. RAILING – CORTI PROPERTY, REF. 3/A15E–549

ARCHITECTURAL ABBREVIATIONS

AL	ALIGN
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
DIM.	DIMENSION
EJ	EXPANSION JOINT
EX.	EXISTING
F.G.	FINISH GRADE
JT	JOINT
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.C.I.	OWNER FURNISHED / CONTRACTOR INSTALLED
P.C.C.	PORTLAND CEMENT CONCRETE
REF.	REFERENCE
S.S.	STAINLESS STEEL
S.F.R.C.	STEEL FIBER REINFORCED CONCRETE
SIM.	SIMILAR
TYP.	TYPICAL

FOR OTHER ABBREVIATIONS, REFERENCE TRIMET STANDARD ABBREVIATIONS, SHEET STM011, TRIMET STANDARD DRAWINGS.

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. FIELD VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK. WHERE NEW WORK IS TO MATCH EXISTING FEATURES TO REMAIN, RECORD EXISTING CONDITIONS PRIOR TO DEMOLITION SO THAT SPACING AND LAYOUT OF PROPOSED ELEMENTS CAN BE PROPERLY LOCATED TO MATCH THE EXISTING CONSTRUCTION MODULE. NOTIFY ENGINEER IMMEDIATELY OF ANY DIMENSIONAL ERRORS OR CONFLICTS WITH THE WORK OF OTHER TRADES.
2. ALL ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE WORK, INCLUDING STRUCTURAL, ELECTRICAL, LANDSCAPE AND CIVIL DRAWINGS.
3. EMBEDDED ITEMS SUCH AS PIPES, INSERTS, SLEEVES, CONDUITS AND STRUCTURAL SUPPORTS AND OPENINGS OR RECESSES REQUIRED FOR ELECTRICAL AND CIVIL WORK ARE NOT SHOWN ON ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL REFER TO TRADES FOR LOCATION AND DETAILS OF THESE ITEMS.
4. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED LOCAL, STATE, AND NATIONAL CODES AND REGULATORY REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION. CONFLICTS, WHERE NOTED BY THE CONTRACTOR, SHALL BE IMMEDIATELY FORWARDED TO THE ENGINEER.
5. EXISTING WORK IS SHOWN BY SCREENED LINE IN THE DRAWING AND/OR IDENTIFIED BY THE TERM ïEXISTING.ò
6. DIMENSIONS ARE TO FACE OF CONCRETE OR MASONRY WALLS OR CENTERLINE OF COLUMN OR MEMBER UNLESS OTHERWISE NOTED.
7. PAVEMENT ELEVATIONS ARE TO TOP OF STRUCTURAL CONCRETE SLABS OR TO TOP OF ARCHITECTURAL FINISHES UNLESS OTHERWISE NOTED.
8. SEE CIVIL DRAWINGS FOR NEW AND EXISTING GRADES OF PAVING AND SIDEWALK ELEVATIONS.
9. ARCHITECTURAL SYMBOLS APPLY TO A15E– SERIES DRAWINGS.
10. ON DRAWINGS DEPICTING LRT PLATFORMS, IF PLAN AND ELEVATION INFORMATION CONFLICT, FOLLOW PLAN INFORMATION.
11. ALL EXPOSED METAL ON SIDEWALK FURNISHINGS, POLES, SHELTERS, HATCHES AND MISCELLANEOUS ELEMENTS MUST BE GROUNDED IF WITHIN 15 FEET OF LRT TRACK CENTERLINE. SEE DETAILS FOR GROUNDING ATTACHMENTS. SEE J15–SERIES DRAWINGS AND E15–SERIES DRAWINGS FOR PLATFORM AND SIDEWALK GROUNDING PLANS.
12. PRESERVE AND PROTECT ALL EXISTING TREES NOT IDENTIFIED FOR REMOVAL. SEE CIVIL AND LANDSCAPE PLANS. SEE L15E–SERIES DWGS FOR TREE PROTECTION AND PRESERVATION NOTES.
13. SOME ITEMS ON THESE DRAWINGS ARE NOT IN CONTRACT (INDICATED N.I.C.), BUT ARE FURNISHED AND INSTALLED BY OTHERS. FOOTINGS OR THICKENED SLABS ARE REQUIRED FOR ANCHORAGE OF MANY OF THESE ITEMS.
14. SCORE DRIVEWAYS OUTSIDE DOWNTOWN MILWAUKIE AREAS IN ACCORDANCE WITH C.O.M. DETAILS #502A–E. MATCH CONDITIONS WITH APPROPRIATE DETAIL.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	XXX		XXX	ISSUED FOR CONSTRUCTION

JMS	DESIGNED	08–09–11 DATE
JFC	DRAWN	08–10–11 DATE
TLC	CHECKED	11–03–11 DATE
	APPROVED	5–14–12 DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT CAROL MAYER-REED OREGON PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 17
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	NONE	A15E–004	RH100544JB	

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ARCHITECTURAL PLAN NOTES

(59) FENCE – TYPE 9A/9C – 48" WELDED WIRE FENCE, REF. 3/A15E–562

(60A) FENCE – TYPE 9A – 48" WELDED WIRE FENCE, REF. 3/A15E–560

(60B) FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. 1/A15E–560

(60C) FENCE – TYPE 9C – 48" GALVANIZED WELDED WIRE FENCE, REF. 3/A15E–560

(60D) FENCE – TYPE 9D – 72" GALVANIZED WELDED WIRE FENCE, REF. 1/A15E–560

(61A) FENCE – TYPE 10A – CL4, 48" CHAIN LINK FENCE, REF. ODOT STD DWG RD815

(61B) FENCE – TYPE 10B – CL6, 72" CHAIN LINK FENCE, REF. ODOT STD DWG RD815

(61C) FENCE GATE – TYPE 10 – CHAIN LINK FENCE GATE, REF. ODOT STD DWG RD815

(61D) FENCE – TYPE 10C – CL8R 96" CHAIN LINK FENCE, REF. ODOT STD DWG DTL 1810

(61E) FENCE – TYPE 10E – CL4, 48" CHAIN LINK FENCE, BLACK VINYL COATED, REF ODOT STD DWG RD815

(62A) FENCE – THROW BARRIER, WWM FENCING, REF. STRUCTURAL

(62B) FENCE – THROW BARRIER, MLK VIADUCT, REF. 1/A15E–563

(62C) FENCE – THROW BARRIER, CONCRETE BARRIER MOUNTED, REF. ODOT STD DWG 1830

(63) FENCE – SCREEN, 72" WELDED WIRE FENCE, REF. 2/A15E–560

(64) FENCE – TYPE 11 – 72" WOOD FENCE, REF A15E–564

(65) FENCE – MAINTENANCE RAIL – REF. STRUCTURAL S15E–1004

(66A) GATE – WELDED WIRE FENCE, MATCH FENCE HEIGHT, REF. 1/A15E–561

(66B) GATE – LOCKABLE GATE AT CHAIN LINK FENCE / RAILING

(66C) GATE – ODOT STANDARD REF. 1/A15E–548

(66D) GATE – FIRE ACCESS REF. 1/A15E–547

(66E) GATE – LOCKABLE GATE AT WOOD FENCE, REF A15E–564

(67) BOLLARD IN BALLAST TRACK, REF. 2/A15E–550

(68) FENCE TRANSITION, REF. 2/A15E–562

(69) NOT USED

(70) NOT USED

(71) NOT USED

(72) NOT USED

(73) NOT USED

(74) NOT USED

(75) NOT USED

(76) NOT USED

(77) NOT USED

(78) NOT USED

(79) NOT USED

(80) RETAINING WALL, REF. STRUCTURAL

(81) NOT USED

(82) GABION RETAINING WALL, REF. STRUCTURAL

(83) CONCRETE BARRIER, REF. CIVIL

(84) P.C.C. STEPS WITH HANDRAIL, REF. 2/A15E–549 FOR HANDRAIL, REF. STRUCTURAL FOR STEPS

(85) RR SAFETY WALL, REF. STRUCTURAL

(86) SOUND WALL, REF. CIVIL / STRUCTURAL

(87) MASONRY WALL, REF. LANDSCAPE

(88) PARK & RIDE SIGN, REF. SEGMENT N DRAWINGS

(89) VINE PLANTING PIT, REF. 3/A15E–522

(90) GRANITE BOULDER, REF. 7/A15E–526

(91) AGGREGATE SPLASH PAD, REF. 3/A15E–522

(92) SAWCUT STREET TREE PLANTER FROM EXISTING SIDEWALK

(93) STORMWATER PLANTER, REF. LANDSCAPING

(94) PLANTING AREA, REF. CIVIL / LANDSCAPING

(95) TROLLEY TRAIL, REF. CIVIL

(96) PROPOSED BUS STOP (N.I.C.)

(97) EXISTING BUS STOP TO REMAIN (N.I.C.)

(98) PRESERVE AND PROTECT EXISTING TREE, REF. LANDSCAPING

(99) UTILITY POLE

ART PLAN NOTES

REF. ART MATRIX SHEETS A15E–010 AND A15E–011 FOR MORE INFORMATION

(A10) OMSI STATION – VIDEO DISPLAY AT SHELTER

(A20) CLINTON STATION – LARGE FREE STANDING STEEL SCULPTURE

(A21) CLINTON STATION – SMALL STEEL SCULPTURE

(A30) POWELL UNDERPASS – TBD

(A40) 17TH AVE CORRIDOR – BOAT SHAPED STEEL SCULPTURES

(A50) BYBEE STATION – KINETIC ILLUMINATED SCULPTURE

(A60) TACOMA STATION PARK AND RIDE – LARGE SCALE "EARTH CAST" SCULPTURES

(A70) LAKE STATION – NORTH PLATFORM GRANITE SCULPTURE

(A71) LAKE STATION – SOUTH PLATFORM GRANITE SCULPTURE

(A80) PARK STATION PARK AND RIDE – LARGE SCALE SCULPTURE

(A90) XX CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST

(A100) KELLOGG BRIDGE – "BOTTS" ADHERED TO UNDERSIDE OF BRIDGE STRUCTURE

(A101) SHELTER COLUMN TREATMENT

(A102) BRIDGE ABUTMENT ART – REF. PMLRTB CONTRACT DWGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06-01-11 DATE
JFC DRAWN 06-01-11 DATE
TLC CHECKED 11-01-11 DATE
APPROVED 5-14-12 DATE

PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: 5–14–12 | APPROVED: | DATE: 5–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 18
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SCALE: NONE | DRAWING NO.: A15E–005 | CONTRACT NO.: RH100544JB | SHEET NO.:

Mar 20, 2012 10:49am RHelden
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NOTES:
1. THIS TABLE DOES NOT COUNT FUTURE SHELTERS, FUTURE TVM'S, OR FUTURE SIGNAGE

LOCATION	PLATFORM SHELTER			SHELTER WINDSCREEN			TVM SHELTER		BIKE SHELTER	LIGHT POLE				CCTV POLE	BENCH							TRASH RECEPTACLE		EMERGENCY PHONE	BIKE RACK		BIKE LOCKER	ART ENCLOSURE	TVM AND VALIDATOR	SIGNS										
	TYPE 1A	TYPE 1B	TYPE 2A	TYPE 1A	TYPE 1B	TYPE 1C	TYPE 1	TYPE 3		TYPE 1	TYPE 2	TYPE 3	TYPE 4		TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE A	TYPE B	TYPE C	TYPE 1	TYPE A		TYPE 1	TYPE A				TYPE A1	TYPE B1	TYPE B2	TYPE C1	TYPE D1	TYPE D2	TYPE E1	TYPE F1	TYPE G1	TYPE H1
OWNER FURNISHED / CONTRACTOR INSTALLED	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X	X		X	X	X	X	X	X	X	X		X	X	X	X
CONTRACTOR FURNISHED / CONTRACTOR INSTALLED									X										X	X	X		X				X												
STATION																																							
OMSI/SE WATER AVE (NB)				2			2			3		3		1								2		1	3			1		4		2	2	4					2
OMSI/SE WATER AVE (SB)				2			2			3		3		2								2		1	9			1		4		2	2	4					2
OMSI/SE WATER AVE – OFF PLATFORM																																							
CLINTON/SE 12TH AVE			1			1	2			6	3			2								2		1	26					6		2	1	4					2
CLINTON/SE 12TH AVE – OFF PLATFORM																																							
SE 17TH AVE & RHINE ST			1		1		2			3	3		1	1								2		1	4					6		2	1	4					2
SE 17TH AVE & RHINE ST – OFF PLATFORM																																							
SE 17TH AVE & HOLGATE BLVD			1			1	2			2	3		2									2		1	8					6		2	1	4					2
SE 17TH AVE & HOLGATE BLVD – OFF PLATFORM																																							
SE BYBEE BLVD	1					1				2	3											4		1	29					6		2	1	4			2		2
SE BYBEE BLVD – OFF PLATFORM																																							
SE TACOMA ST/JOHNSON CREEK			1			1	2			6	3		1									2		1	17					6		2	1	4		1			2
SE TACOMA ST/JOHNSON CREEK – OFF PLATFORM																																							
MILWAUKIE/MAIN ST	1				1		2			5	3											2		1	12					6		2	1	4					2
MILWAUKIE/MAIN ST – OFF PLATFORM																																							
SE PARK AVE	1				1		2			6	6		2									2		1	6					6		4	1	8					2
SE PARK AVE – OFF PLATFORM																																							
TOTALS	8	0	4	9	3	4	20	0	0	42	27	12	6	6	0	0	0	0				26		12	114			2		62	0	20	16	52		1	2	4	24

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06-01-11 DATE
SPT DRAWN 06-01-11 DATE
TLC CHECKED 11-01-11 DATE
APPROVED 5-14-12 DATE

REGISTERED 82 PROFESSIONAL CAROL MARIE REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: 5-14-12 | APPROVED: | DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 19
ARCHITECTURAL
PLATFORM AMENITIES AND SIGNAGE MATRIX PORTLAND SEGMENT

SCALE: NONE | DRAWING NO.: A15E-006 | CONTRACT NO.: RH100544JB | SHEET NO.:

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LEGEND

ART – CONCRETE STAMPING

BICYCLE TRAFFIC MARKING, REF. TRAFFIC PLANS

BOLLARD

BOLLARD IN BALLAST TRACK

COLORED P.C.C.

FENCING

FIRE HYDRANT

FLEXIBLE POROUS PAVING

FREESTANDING BENCH

GRAVEL

LIGHT

LIMIT OF WORK

MORTAR SET COBBLE PAVING

OCS POLE

PEDESTRIAN RAMP

PRECAST CONCRETE PAVERS

PRECAST TACTILE PAVERS

PROPOSED BIKE RACKS

PROPOSED BIKE RACKS WITH BIKE SHELTER

RAILINGS

RETAINING WALL

SHELTER – REF PLANS FOR TYPE

TACTILE WARNING

TRASH RECEPTACLE

TRAFFIC SIGNAL POLE

TREE AT PLANTER

TREE GRATE – TYPE 1, 4'X4'

UNIT PAVERS

UTILITY POLE

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT CAROL MARIE REED OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

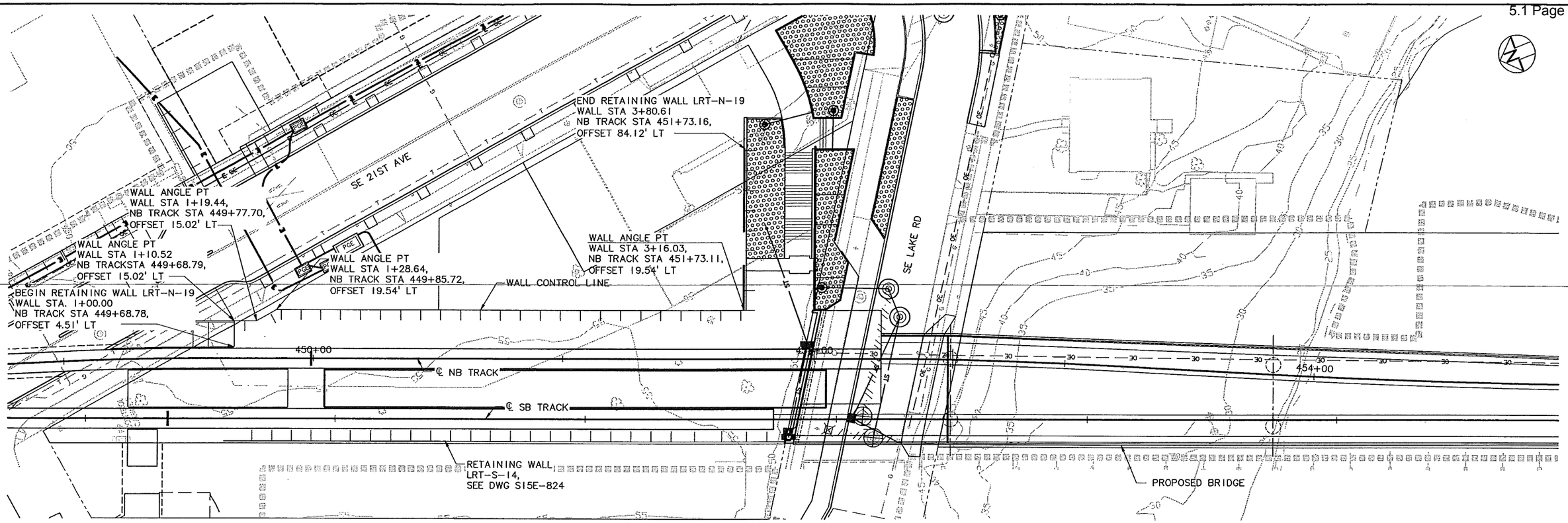
DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 20
ARCHITECTURAL
LEGEND

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
NONE	A15E-007	RH100544JB	

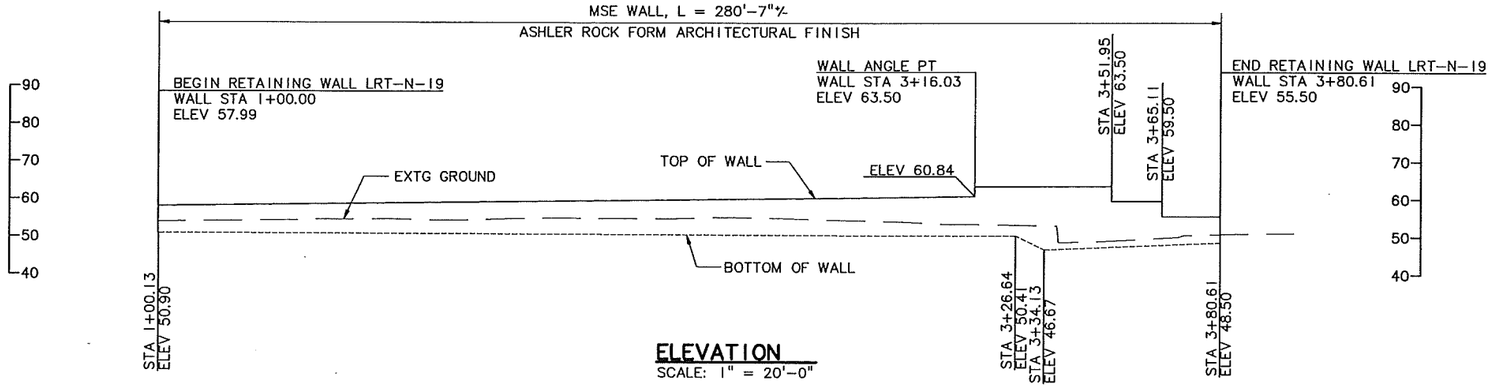


GENERAL NOTES:

1. WALL CONTROL LINE IS THE FRONT FACE OF WALL AT TOP OF BALLAST, UNLESS NOTED OTHERWISE.

PLAN

SCALE: 1" = 20'-0"



ELEVATION

SCALE: 1" = 20'-0"

NOTE:

ALL HORIZONTAL DIMENSIONS MEASURED ALONG WALL CONTROL LINE

90% FINAL DESIGN
11-28-11

NO.	DATE	BY / CHK.	APPD.	REVISIONS

GAP	DESIGNED	4/27/11 DATE
JJC	DRAWN	5/4/11 DATE
...	CHECKED	.... DATE
.	APPROVED	.. DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS DIVISION, 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 21
STRUCTURAL
MILWAUKIE – RETAINING WALLS
PLAN AND ELEVATION – LRT-N-19

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	S15E-823	RH100544JB	

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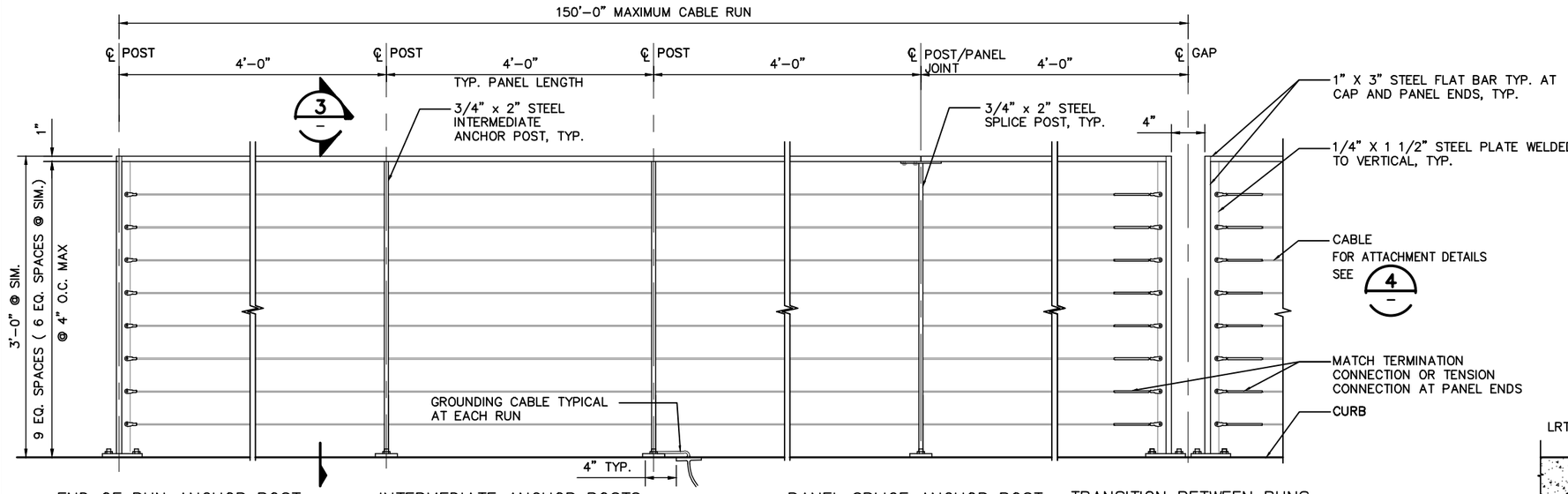
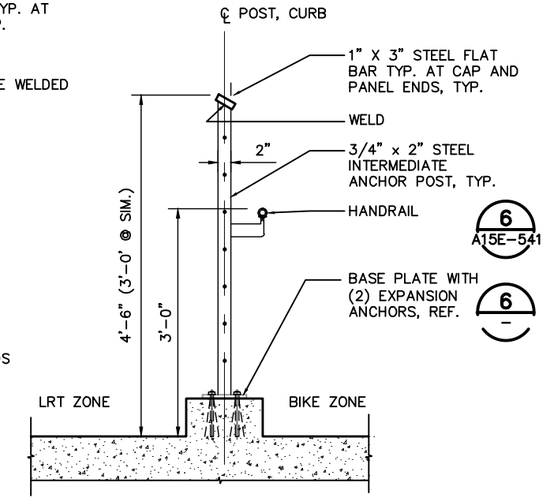
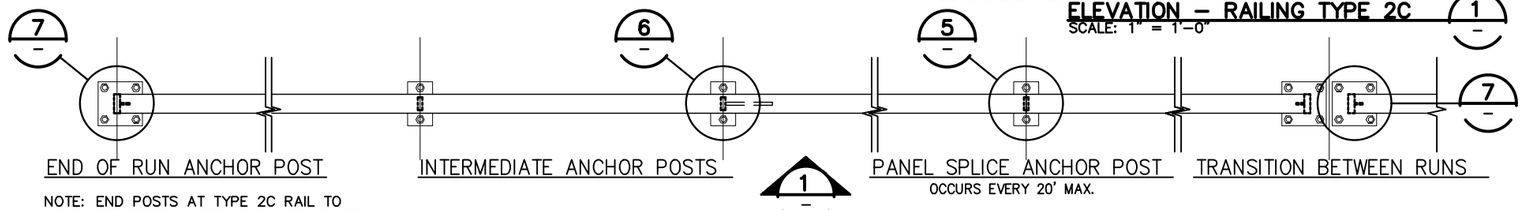


ELEVATION – RAILING TYPE 2C 1
SCALE: 1" = 1'-0"



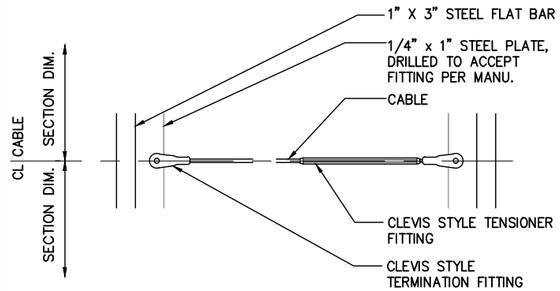
SECTION – RAILING TYPE 2C 3
SCALE: 1" = 1'-0"



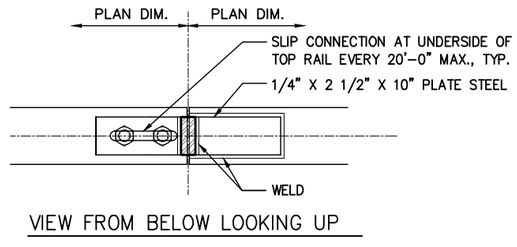
NOTE: END POSTS AT TYPE 2C RAIL TO HAVE REFLECTIVE MATERIAL – REF. TRAFFIC PLANS

PLAN – RAILING TYPE 2B/2C 2
SCALE: 1" = 1'-0"

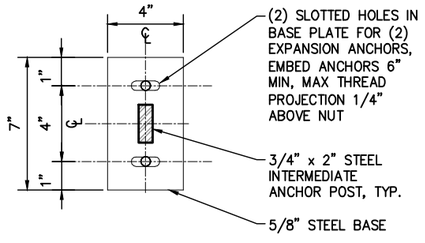
GENERAL NOTES:
1. ALL STEEL IN RAILING ASSEMBLIES TO BE GALVANIZED.
2. ALL CABLE TO BE 3/16" STAINLESS STEEL.
3. ALL CABLE FITTINGS TO BE STAINLESS STEEL.
4. RUN LENGTHS NOT TO EXCEED 150'
5. POSTS SHOULD ALIGN WITH SCORED CONCRETE JOINTS OR MIDWAY BETWEEN JOINTS AS POSSIBLE.
6. GRIND ALL WELDS SMOOTH



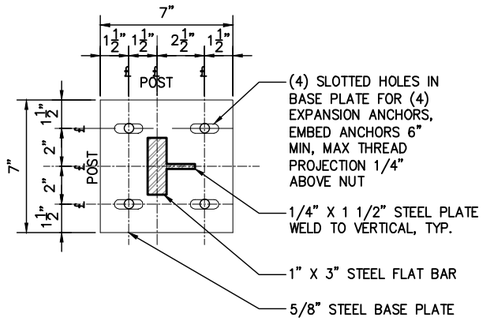
RAILING CABLE FITTINGS 4
SCALE: 3" = 1'-0"



SLIP CONNECTION 5
SCALE: 3" = 1'-0"



INTERMEDIATE BASE PLATE 6
SCALE: 3" = 1'-0"



END OF RUN BASE PLATE 7
SCALE: 3" = 1'-0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	10-19-11	DATE
SPT DRAWN	10-19-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 22
ARCHITECTURAL
DETAILS – RAILINGS

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	VARIES	A15E-540	RH100544JB	

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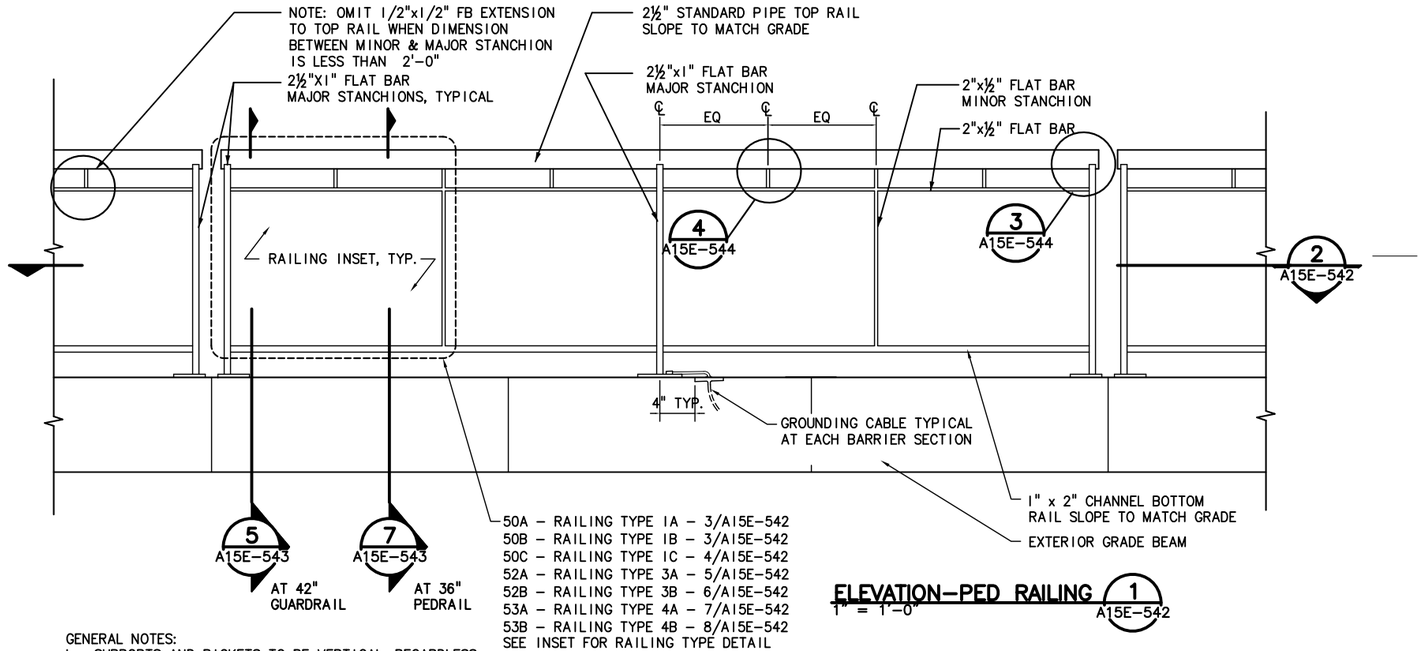
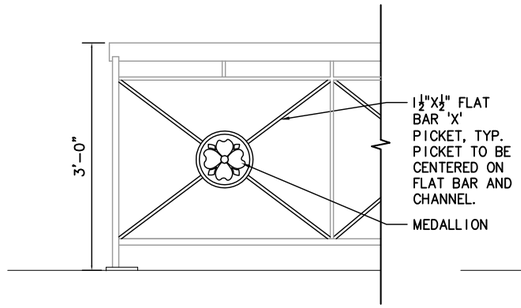
Mar 20, 2012 10:59am
RHelden

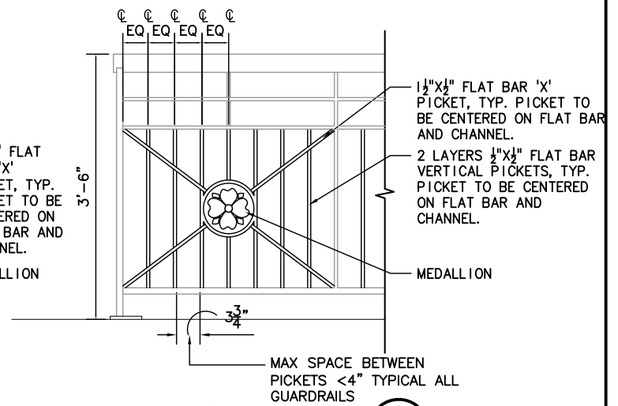


ELEVATION–PED RAILING 1 A15E-542
1" = 1'-0"

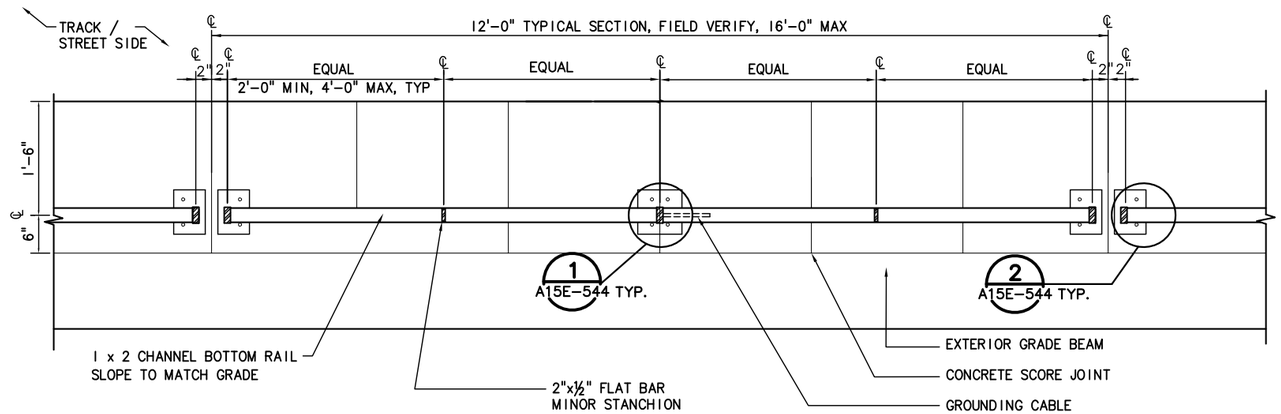
GENERAL NOTES:
1. SUPPORTS AND PICKETS TO BE VERTICAL, REGARDLESS OF PAVING SLOPE.
2. BUILD GUARD/PED-RAIL IN STRAIGHT SECTIONS TANGENT WITH SIDEWALK PROFILE.
3. HOT DIP GALVANIZE AFTER FABRICATION, TYPICAL, UNLESS OTHERWISE NOTED.
4. RAILING COMBINATION WITH INSET 52A AND 52B TO BE PAINTED P2 BLACK, SEE SPECIFICATION. HANDRAIL, WHERE OCCURS, TO REMAIN STAINLESS STEEL FINISH.



INSET 52A/3A 5 A15E-542
1" = 1'-0"



INSET 52B/3B 6 A15E-542
1" = 1'-0"



PLAN–PED RAILING 2 A15E-542
1"=1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
VC DRAWN	10-07-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. SKINNER STATE OF OREGON PORTLAND, OREGON
PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning
Mayer/Reed

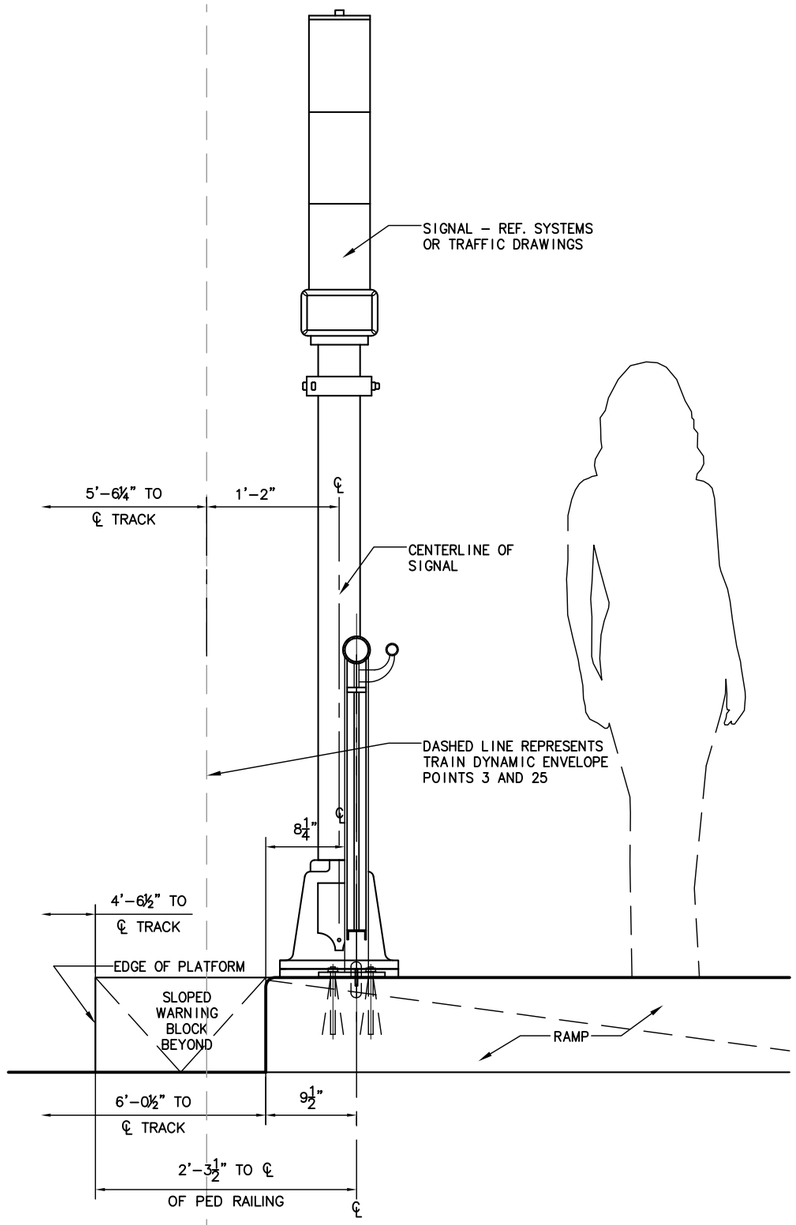
TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

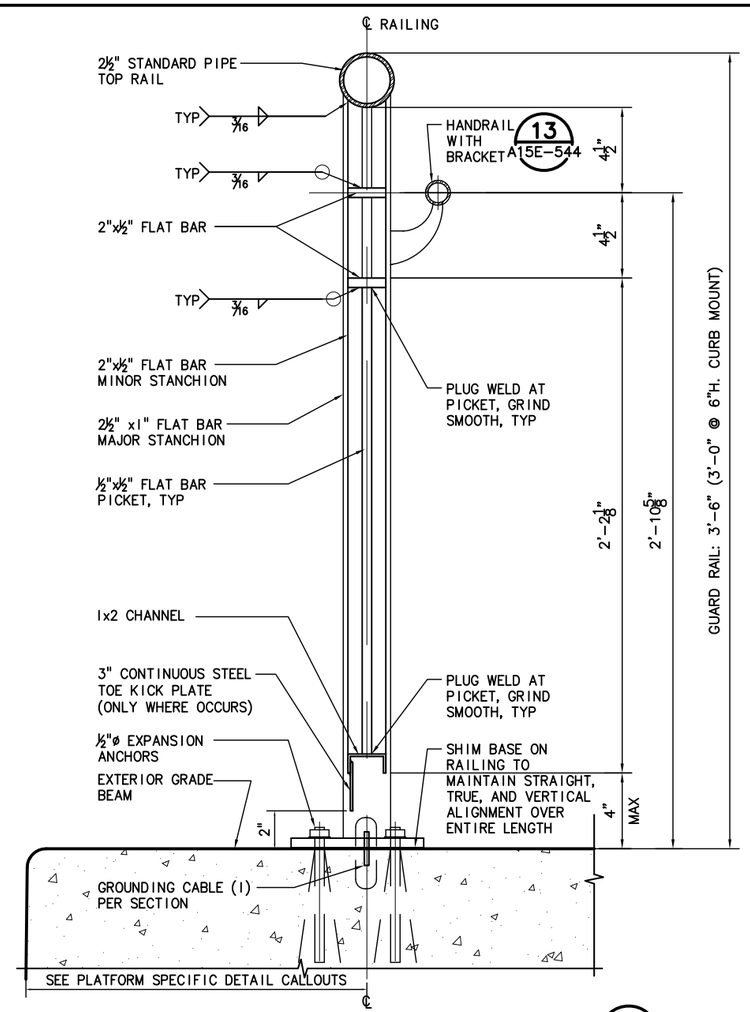
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 23
ARCHITECTURAL
TYPICAL GUARD / PED RAILING
ELEVATIONS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-542	RH100544JB	

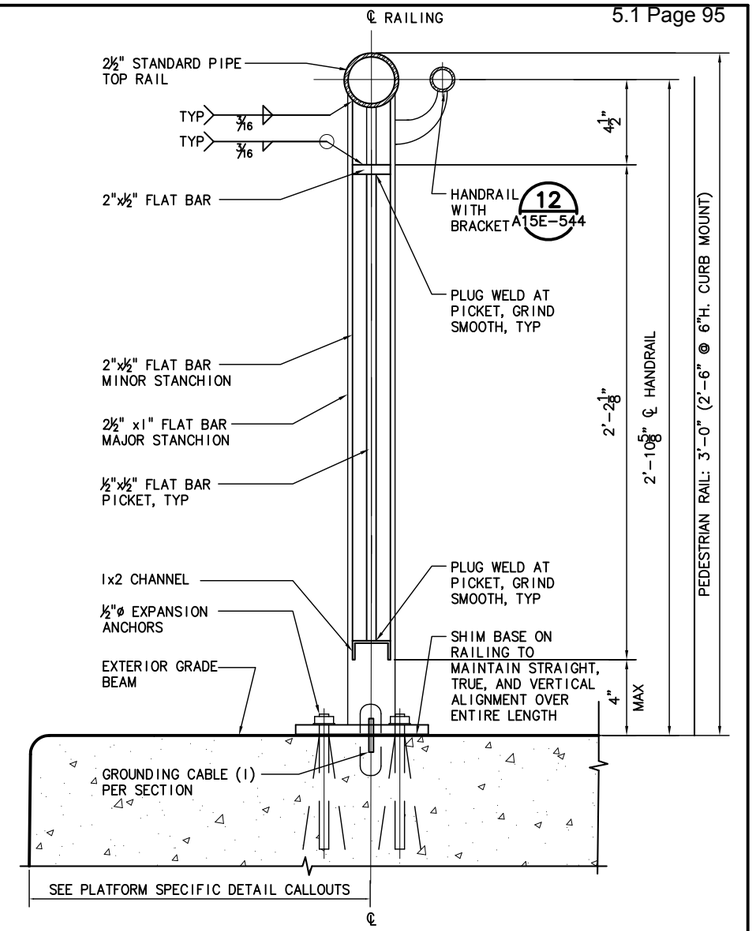
P:\10_jobs\0350.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-542.dwg Mar. 13, 2012 - 12:57 PM meredith hendricks
Plot Date:3/20/2012 12:19 PM_meredith hendricks



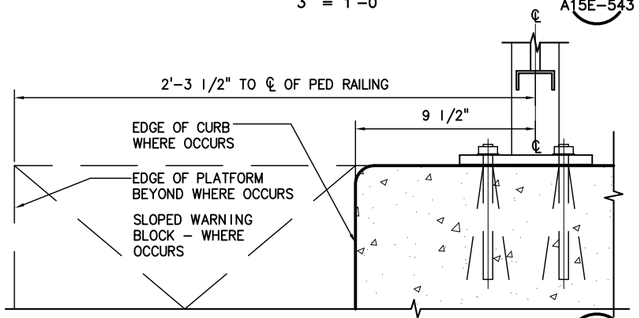
SECTION – SIGNAL & RAILING LOCATION 1 / A15E-543
1 1/2" = 1'–0"



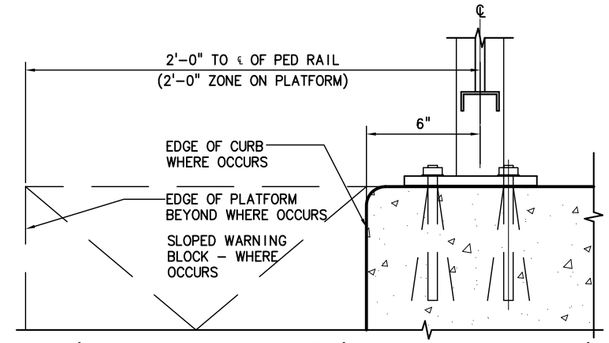
SECTION – GUARDRAIL 5 / A15E-543
3" = 1'–0"



SECTION – PED RAIL 7 / A15E-543
3" = 1'–0"



GUARD/PED RAIL BASE PLATE (WITH SIGNAL ø RAILING) 6 / A15E-543
3" = 1'–0"



GUARD/PED RAIL BASE PLATE (NO SIGNAL ø RAILING) 8 / A15E-543
3" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
VC DRAWN	10-07-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT · JON C. [illegible] · PORTLAND, OREGON · STATE OF OREGON
PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

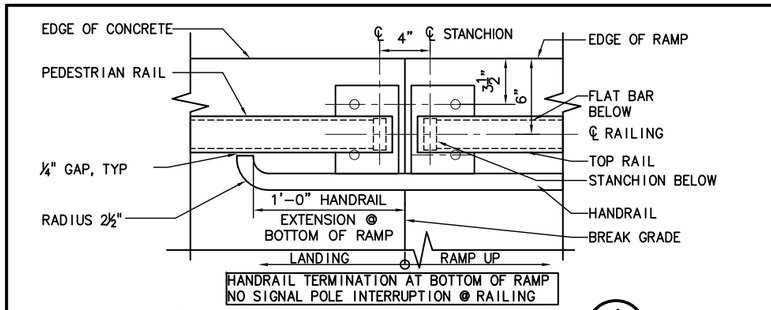
waterleaf architecture, interiors & planning
Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

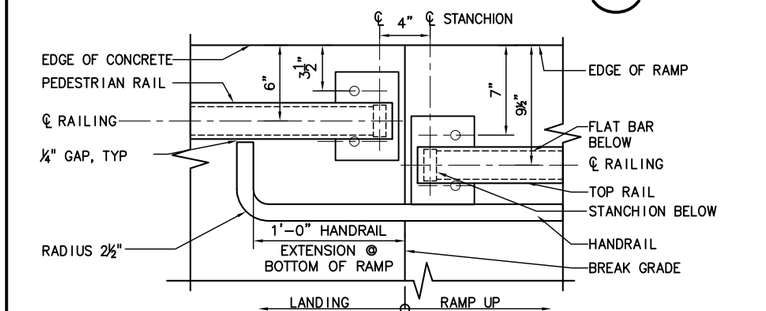
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 24
ARCHITECTURAL
TYPICAL GUARD / PED RAILING SECTIONS

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	VARIES	A15E–543	RH100544JB	

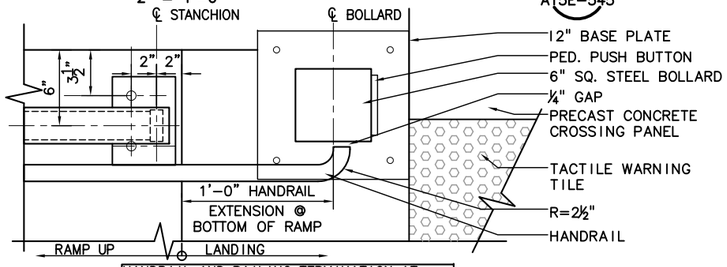
P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-543.dwg Mar. 13, 2012 - 12:58 PM meredith hendricks
Plot Date: 3/20/2012 12:21 PM meredith hendricks



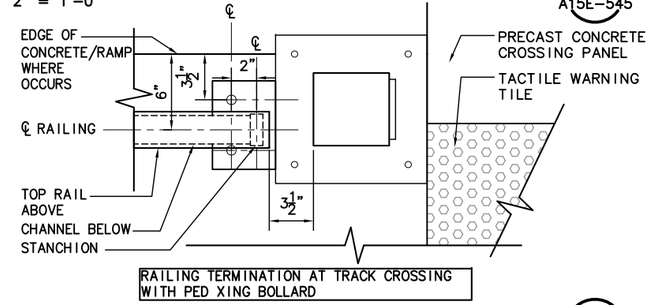
RAILING PLAN @ BOTTOM OF RAMP 1
2" = 1'–0" — A15E–545



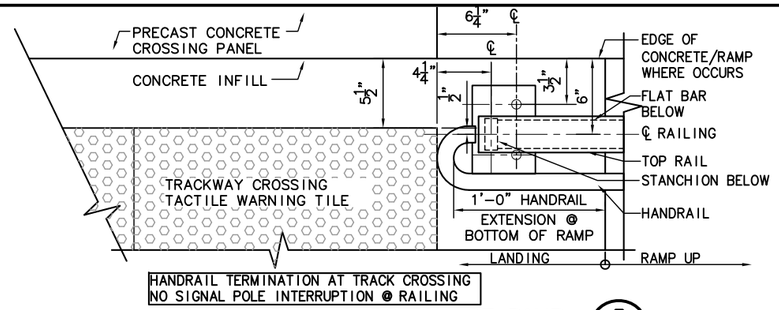
RAILING PLAN @ BOTTOM OF RAMP 2
2" = 1'–0" — A15E–545



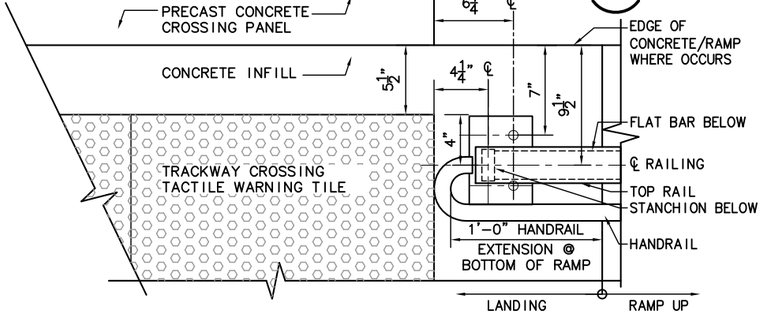
RAILING PLAN @ TRACK CROSSING WITH BOLLARD 3
2" = 1'–0" — A15E–545



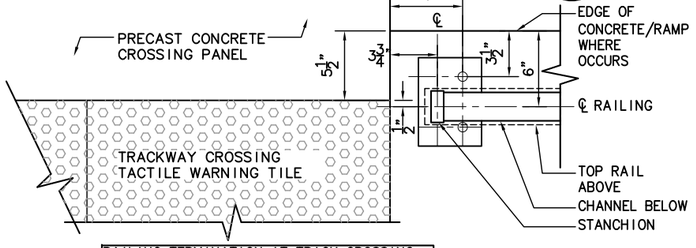
RAILING PLAN @ TRACK CROSSING WITH BOLLARD 4
2" = 1'–0" — A15E–545



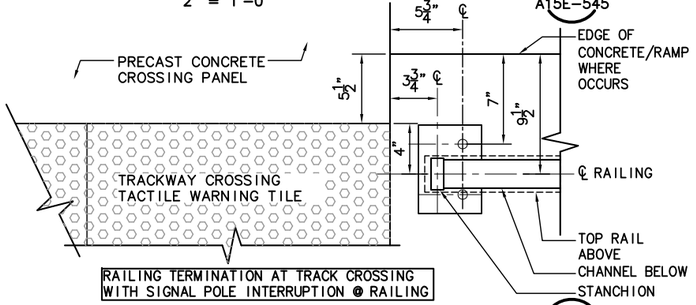
RAILING PLAN @ BOTTOM OF RAMP 5
2" = 1'–0" — A15E–545



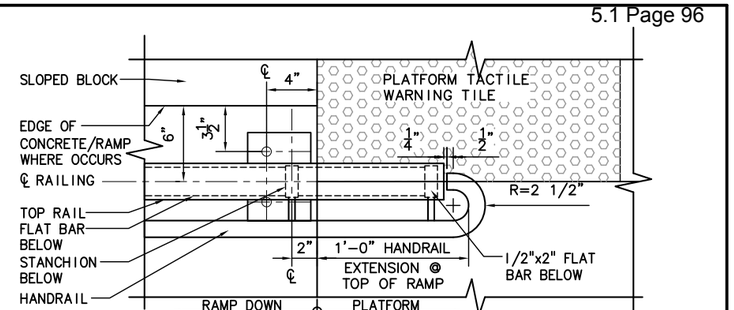
RAILING PLAN @ BOTTOM OF RAMP 6
2" = 1'–0" — A15E–545



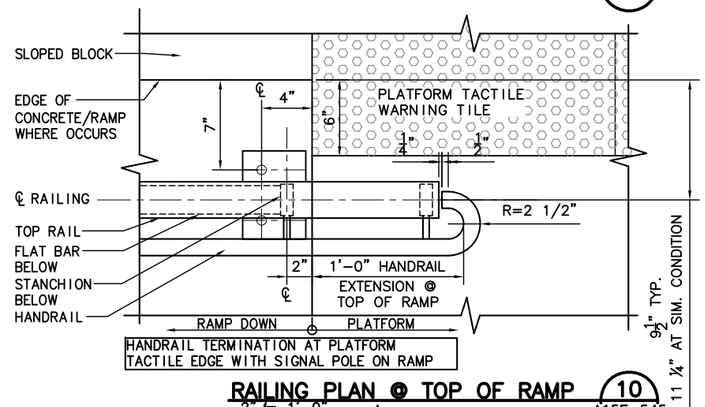
RAILING PLAN @ TRACK CROSSING 7
2" = 1'–0" — A15E–545



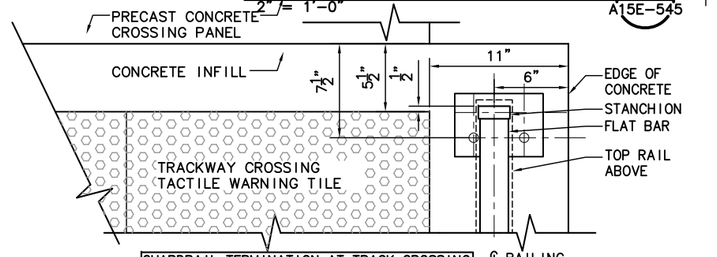
RAILING PLAN @ TRACK CROSSING 8
2" = 1'–0" — A15E–545



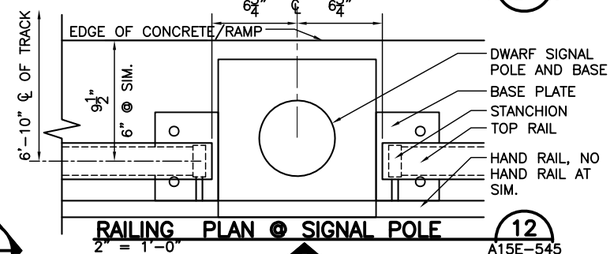
RAILING PLAN @ TOP OF RAMP 9
2" = 1'–0" — A15E–545



RAILING PLAN @ TOP OF RAMP 10
2" = 1'–0" — A15E–545



RAILING PLAN @ TRACK CROSSING 11
2" = 1'–0" — A15E–545



RAILING PLAN @ SIGNAL POLE 12
2" = 1'–0" — A15E–545

1 A15E–543

10 A15E–544

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-09-11	DATE
VC DRAWN	10-17-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. SKINNER PORTLAND, OREGON STATE OF OREGON — PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning — Mayer/Reed

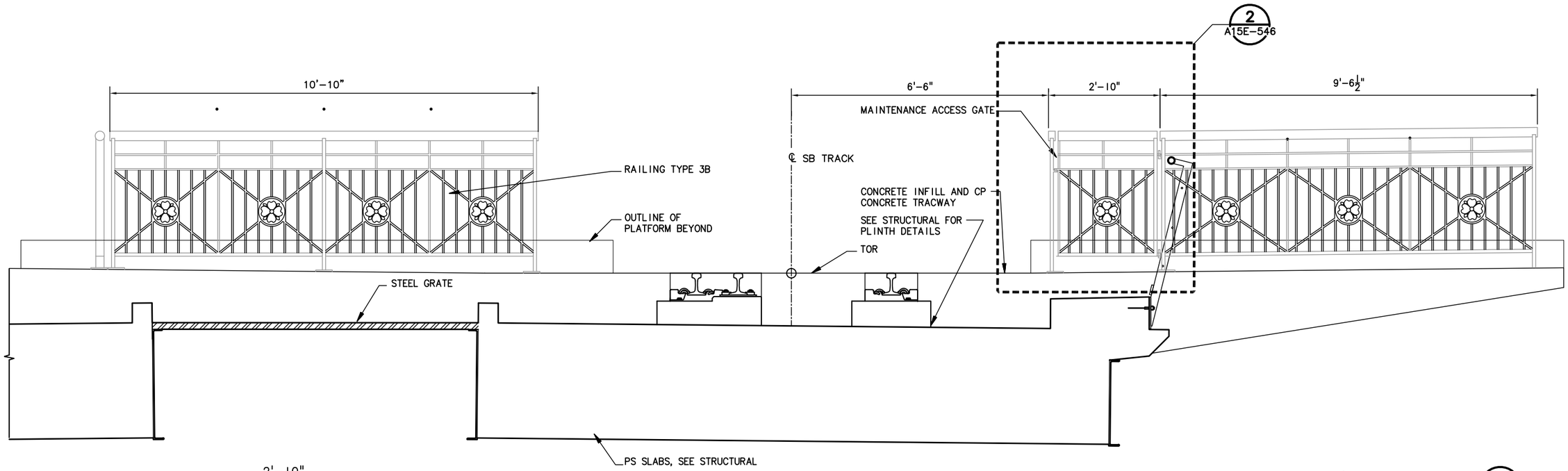
TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5–14–12		5–14–12

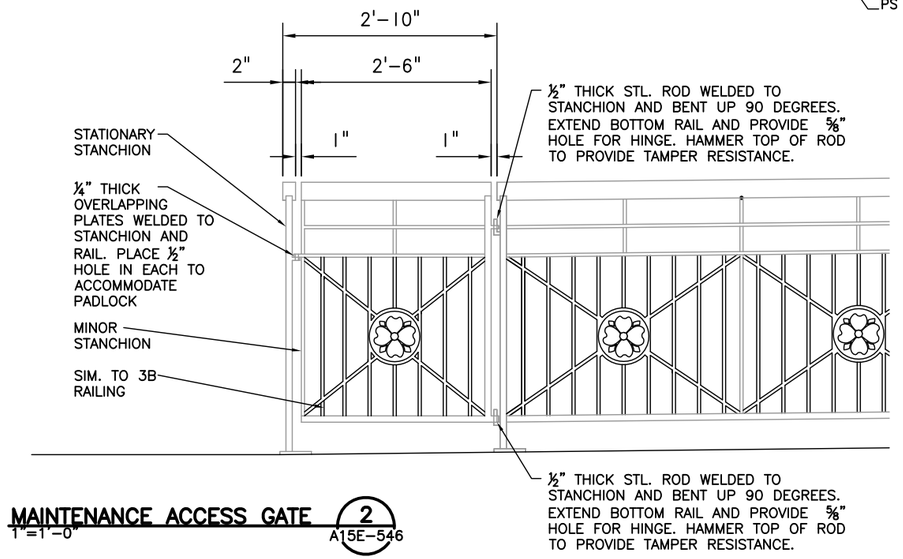
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 25
ARCHITECTURAL
TYPICAL GUARD / PED RAILING
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E–545	RH100544JB	

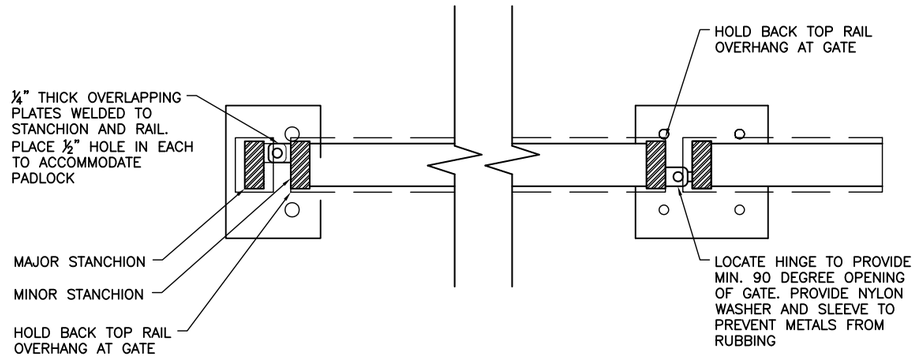
P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E–545.dwg Mar. 13, 2012 – 1:00 PM meredith hendricks
Plot Date:3/20/2012 12:22 PM_meredith hendricks



RAILING AT MILWAUKIE/MAIN ST STATION 1
3/4"=1'-0" A15E-546



MAINTENANCE ACCESS GATE 2
1"=1'-0" A15E-546



MAINTENANCE ACCESS GATE 3
3"=1'-0" A15E-546

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-09-11	DATE
MH DRAWN	5-09-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT · JON C. MAYER · PORTLAND, OREGON · STATE OF OREGON · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning
Mayer/Reed

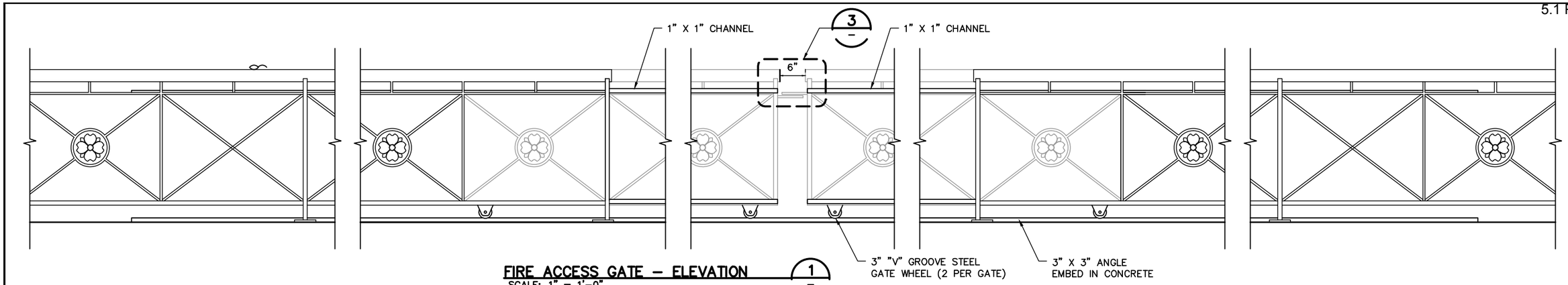
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

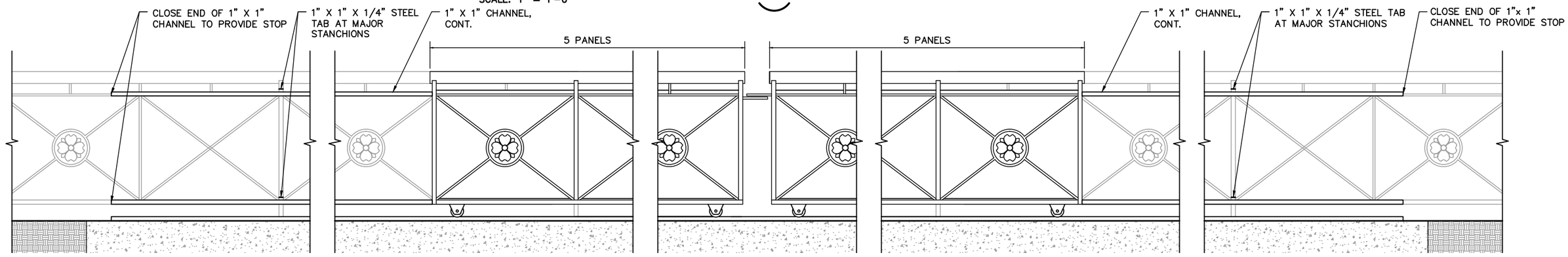
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 26
ARCHITECTURAL
GUARD RAIL DETAILS
MILWAUKIE

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-546	RH100544JB	

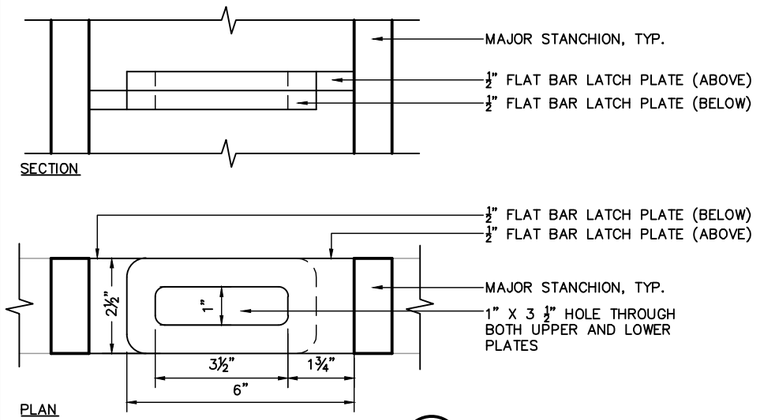
P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-546.dwg Mar. 16, 2012 - 1:41 PM meredith hendricks
Plot Date:3/20/2012 2:47 PM meredith hendricks



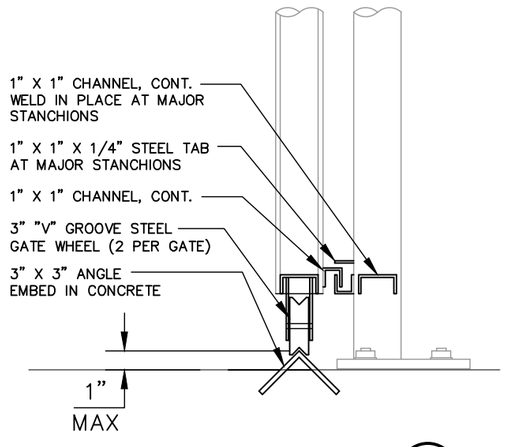
FIRE ACCESS GATE – ELEVATION 1
SCALE: 1" = 1'–0"



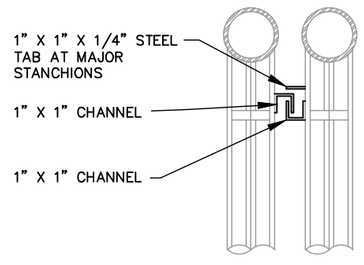
FIRE ACCESS GATE – ELEVATION 2
SCALE: 1" = 1'–0"



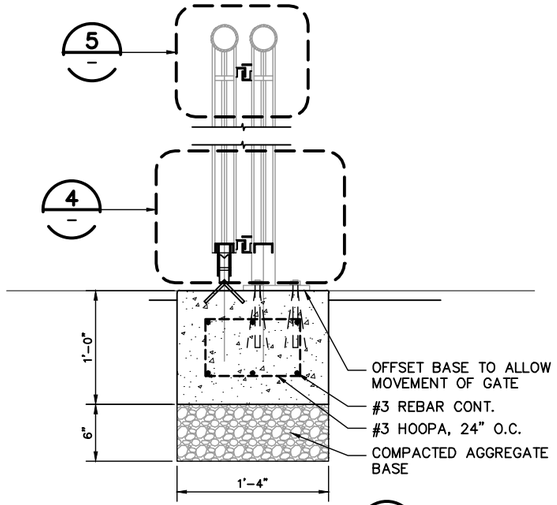
FIRE GATE – LATCH 3
SCALE: 3" = 1'–0"



FIRE GATE – BOTTOM CHANNEL 4
SCALE: 3" = 1'–0"



FIRE GATE – TOP CHANNEL 5
SCALE: 3" = 1'–0"



FIRE GATE – SECTION 6
SCALE: 1–1/2" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06–01–11 DATE
SPT DRAWN 06–01–11 DATE
TLC CHECKED 11–04–11 DATE
APPROVED 5–14–12 DATE

REGISTERED LANDSCAPE ARCHITECT CAROL MAYER-REED OREGON PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

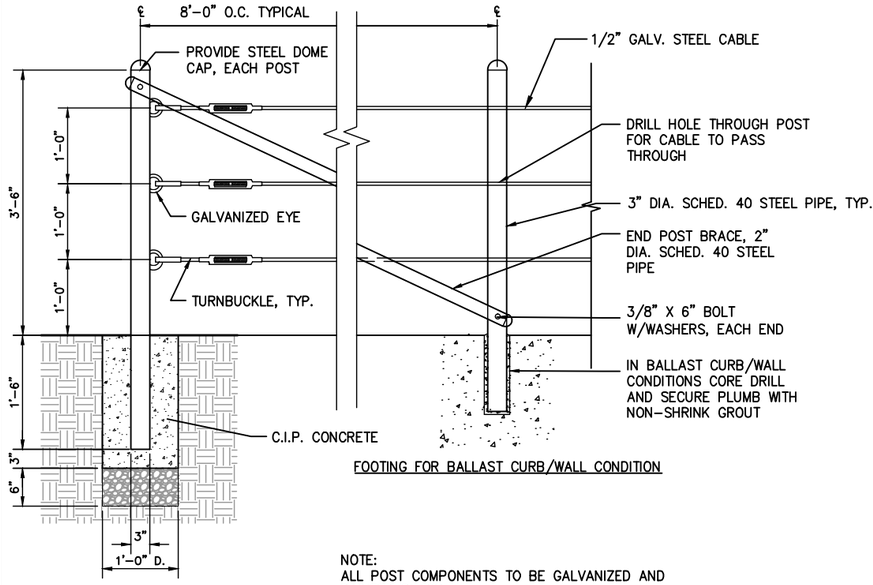
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 5–14–12
APPROVED: DATE: 5–14–12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 27
ARCHITECTURAL
DETAILS – FIRE GATE ACCESS

SCALE: VARIES | DRAWING NO.: A15E–547 | CONTRACT NO.: RH100544JB | SHEET NO.:

M:\1 LA PROJECTS\PME\dwgs\sheets\A15E–547.dwg
Mar 20, 2012 2:21pm RHelden

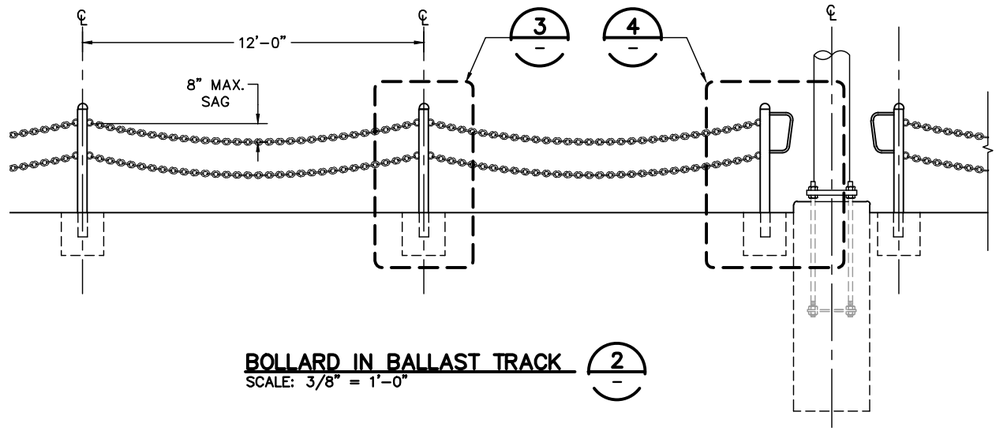


FOOTING FOR BALLAST CURB/WALL CONDITION

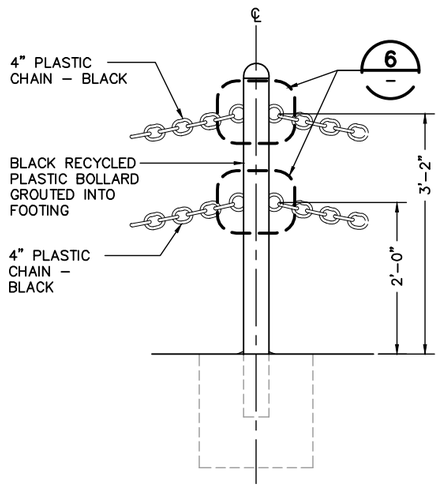
FOOTING FOR IN-GRADE CONDITION

NOTE:
ALL POST COMPONENTS TO BE GALVANIZED AND PAINTED BLACK.

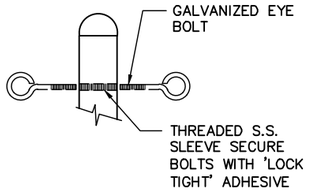
RAILING - TYPE 7A (CABLE SAFETY RAILING) 1
SCALE: 1" = 1'-0"



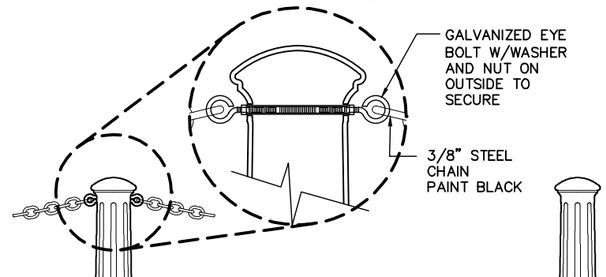
BOLLARD IN BALLAST TRACK 2
SCALE: 3/8" = 1'-0"



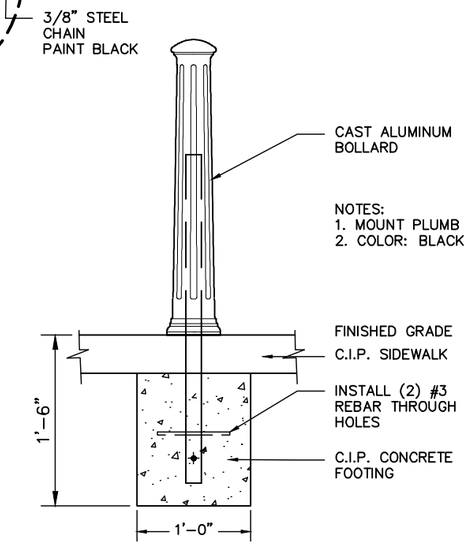
PLASTIC BOLLARD W/ CHAIN - TYPICAL 3
SCALE: 1" = 1'-0"



CHAIN CONNECTION DETAIL 6
SCALE: 1-1/2" = 1'-0"

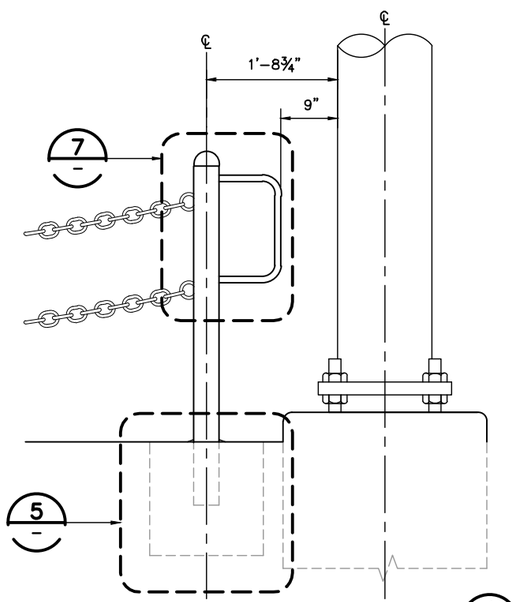


BOLLARD WITH CHAIN IN LANDSCAPE

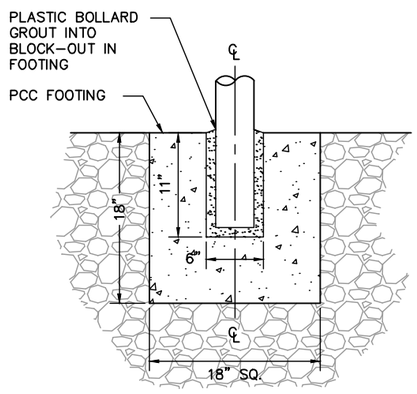


FREE STANDING BOLLARD IN WALKWAYS

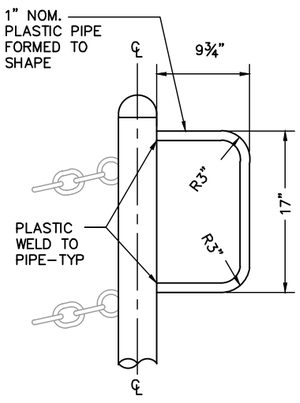
CITY OF MILWAUKIE BOLLARD 8
SCALE: 1-1/2" = 1'-0"



PLASTIC BOLLARD AT OCS POLE 4
SCALE: 1" = 1'-0"



PLASTIC BOLLARD FOOTING 5
SCALE: 1-1/2" = 1'-0"



PLASTIC BOLLARD EXTENSION 7
SCALE: 1-1/2" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11 DATE	
SPT DRAWN	06-01-11 DATE	
TLC CHECKED	11-04-11 DATE	
APPROVED	5-14-12 DATE	

REGISTERED CAROL MAUCH REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

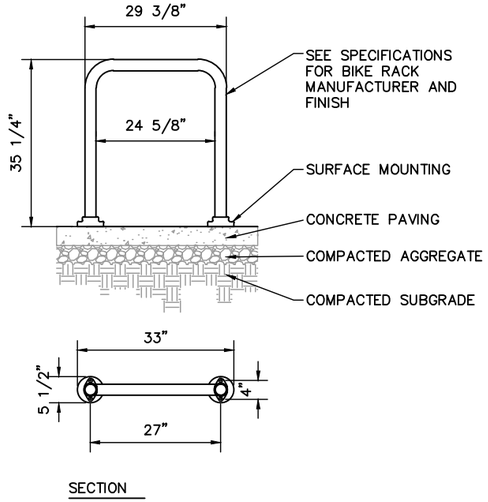
DAVID EVANS AND ASSOCIATES INC.

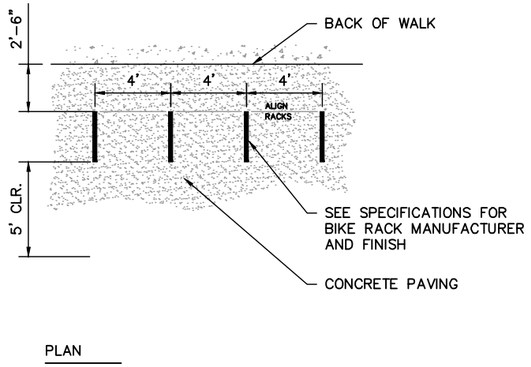
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND - MILWAUKIE LRT
EAST SEGMENT Exhibit T 28
ARCHITECTURAL
DETAILS - PED BOLLARDS

SUBMITTED:	DATE: 5-14-12	APPROVED:	DATE: 5-14-12	SCALE: VARIES	DRAWING NO.: A15E-550	CONTRACT NO.: RH100544JB	SHEET NO.:

M:\1 LA PROJECTS\PME\dwgs\sheets\A15E-550.dwg Mar 20, 2012 11:02am RHelsden

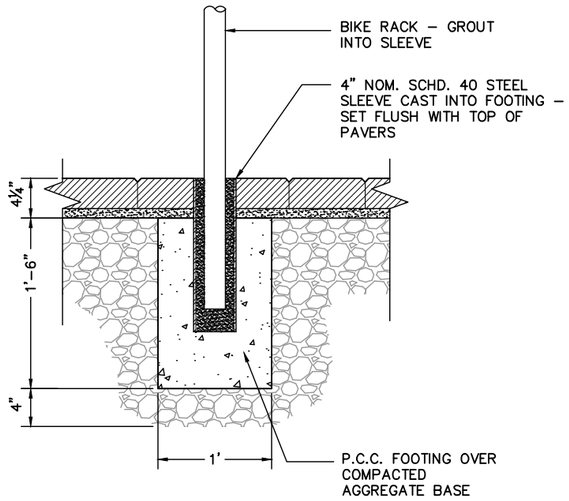




BIKE RACK AT P.C.C. SIDEWALK (O.F.C.I.) (FREESTANDING SURFACE MOUNT)

NTS

1 / –



BIKE RACK AT CONCRETE PAVER

NTS

2 / –

BIKE LOCKER

NTS

3 / –

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	XXX		XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED LANDSCAPE ARCHITECT · OREGON · CAROL MAYER-REED · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

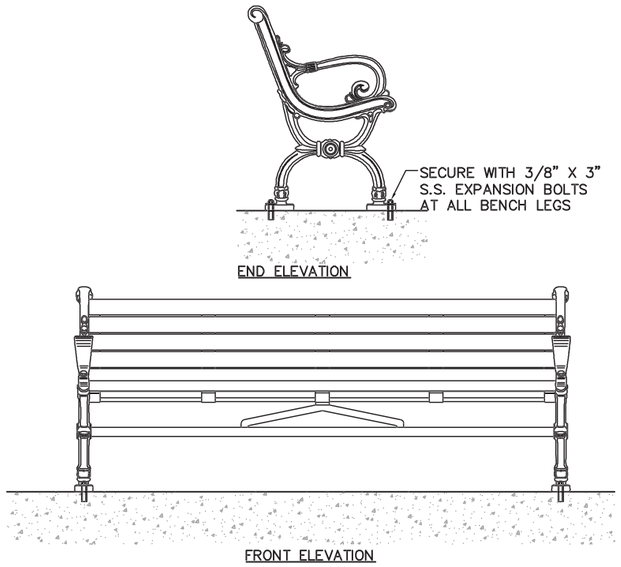
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
DETAILS – FURNISHING

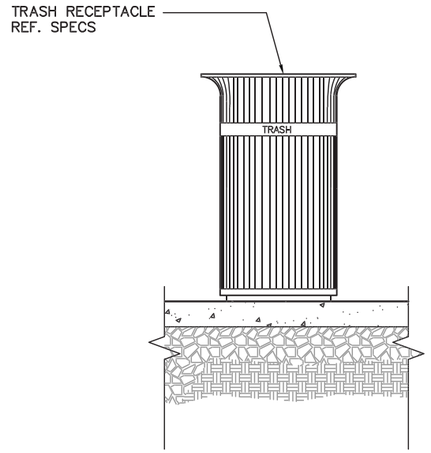
Exhibit T 29

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	VARIES	A15E-571	RH100544JB	

M:\1 LA PROJECTS\PME\dwgs\sheets\A15E-571.dwg Mar 20, 2012 11:04am RHelden



CITY OF MILWAUKIE BENCH (1)
NTS



TRASH RECEPTACLE – TYPE 1 (O.F.C.I.) (CITY OF MILWAUKIE) (2)
NTS

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX		ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11 DATE	
SPT DRAWN	06-01-11 DATE	
TLC CHECKED	11-04-11 DATE	
APPROVED	5-14-12 DATE	

REGISTERED 82 LANDSCAPE ARCHITECT · CAROL BAKER REED · OREGON · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

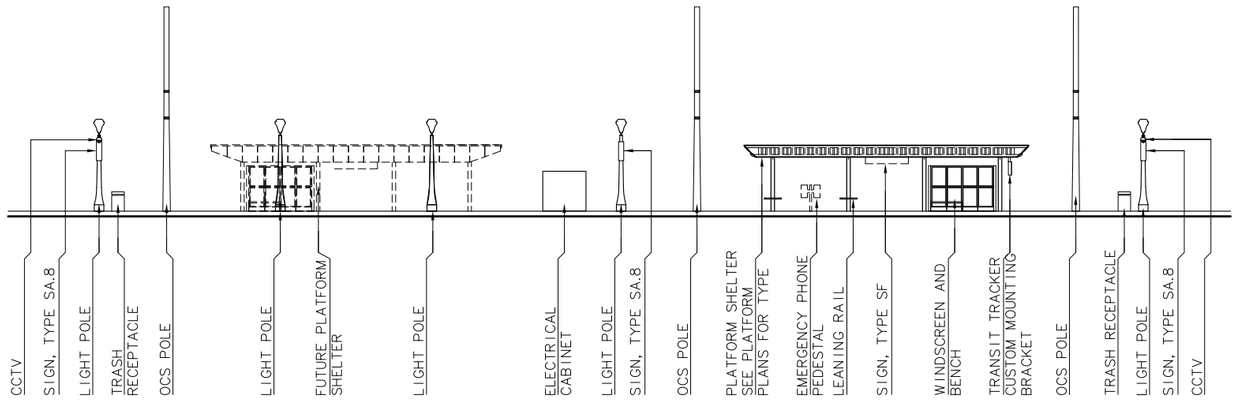
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 30
ARCHITECTURAL
DETAILS – FURNISHING

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	VARIES	A15E-572	RH100544JB	

Mar 20, 2012 11:05am RHelden
M:\1 LA PROJECTS\PME\dwgs\sheets\A15E-572.dwg

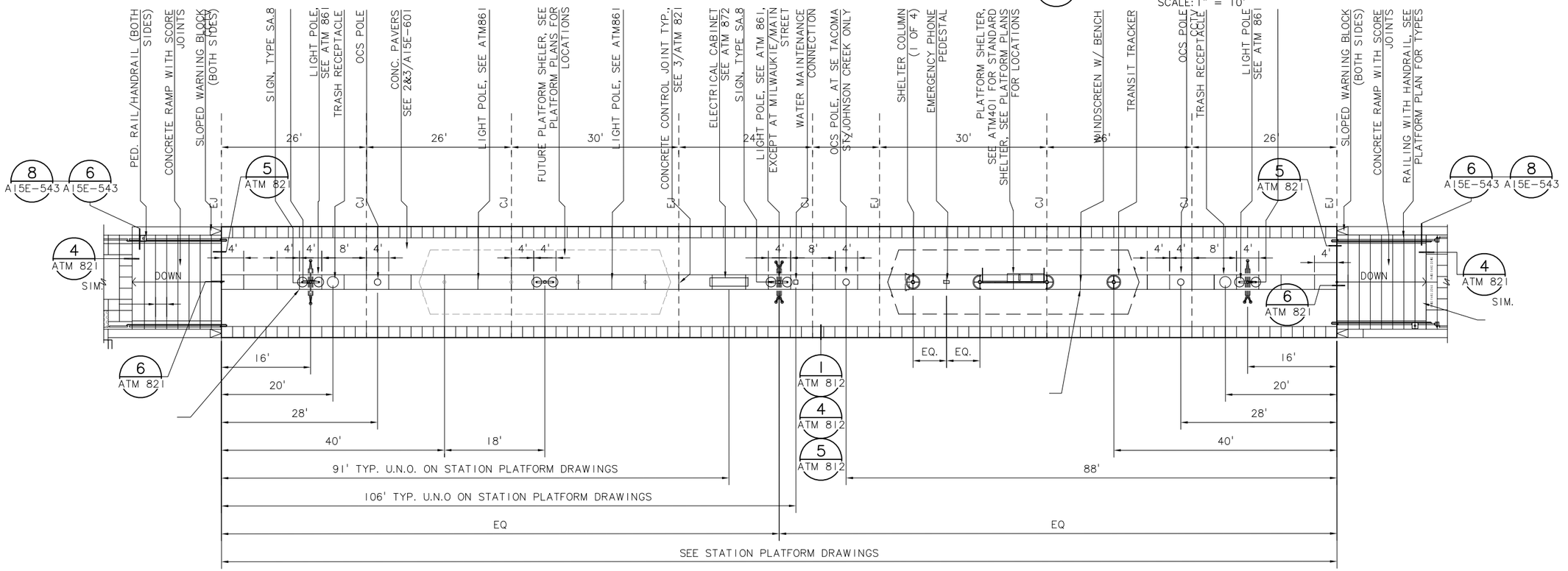
GENERAL NOTE:
1. LOCATE PLATFORM ELEMENTS AS SHOWN UNLESS DIMENSIONED OTHERWISE ON STATION PLATFORM DRAWINGS.
2. SEE PLATFORM DRAWINGS AND UTILITY DRAWINGS FOR ADDITIONAL OCS POLE LOCATIONS.
3. ADDITIONAL CCTV REQUIRED AT OMSI/SE WATER AVE., SEE A15E-400 AND A15E-401 FOR PLATFORM LOCATIONS.
4. MODIFIED PLATFORM SHELTERS TO BE INSTALLED AT OMSI/SE WATER AVE, SE BYBEE BLVD, MILWAUKIE/MAIN STREET AND SE PARK AVE. STATIONS.
5. SEE CIVIL FOR PLATFORM CONSTRUCTION DETAILS.
6. SEE STRUCTURAL FOR PLATFORM ELEMENTS FOUNDATION DETAILS.
7. PROVIDE ALL FOUNDATIONS AND UTILITIES FOR FUTURE SHELTERS.
8. SEE STRUCTURAL FOR EXPANSION AND CONTRACTION JOINT DETAILS.
9. SEE SHEET A15E-601 FOR TYPICAL PLATFORM ELEMENTS PLAN LOCATIONS AND DETAILS.
10. SEE A15E-800 SERIES SHEETS FOR SIGN TYPES.
11. SEE SHEETS A15E-542 FOR ON & OFF PLATFORM RAILING TYPES.
12. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION



TYPICAL STATION PLATFORM ELEVATION
SCALE: 1" = 10'-0"

1 / A15E-600

10' 5' 0' 10' 20'
SCALE: 1" = 10'



PLATFORM PLAN
SCALE: 1" : 10'-0"

2 / A15E-600

10' 5' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-09-11	DATE
AM DRAWN	5-18-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	3-26-12	DATE

REGISTERED ARCHITECT JON C. SKINNER PORTLAND, OREGON STATE OF OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

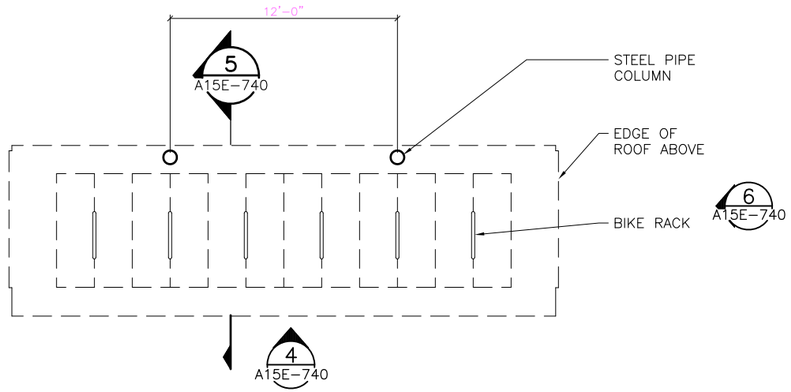
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	3-26-12		3-26-12

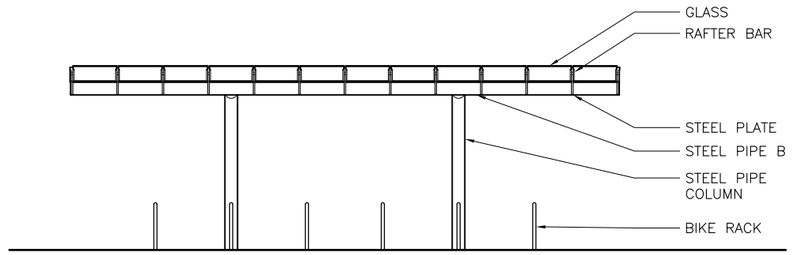
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT **Exhibit T 31**
ARCHITECTURAL
PLATFORM DETAILS
STANDARD PLATFORM ELEMENTS ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 10'-0"	A15E-600	RH100544JB	

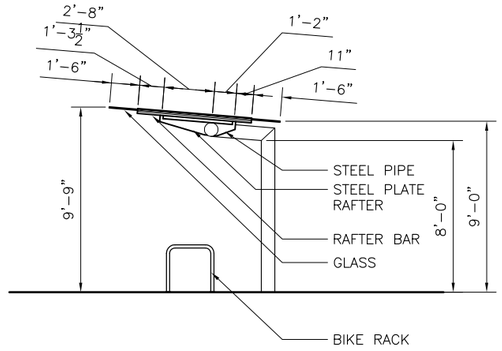
P:\10_jobs\10.30.01 Portland Milwaukie Light Rail\cad\Sheets\600_Platform Details\A15E-600.dwg Mar. 07, 2012 - 3:51 PM meredith hendricks
Plot Date: 3/20/2012 2:49 PM meredith hendricks



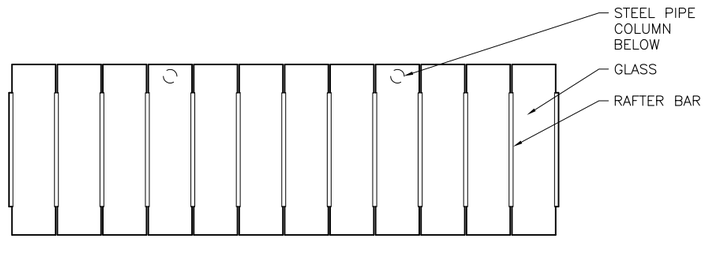
BIKE SHELTER PLAN 1
1/4" = 1'-0" A15E-740



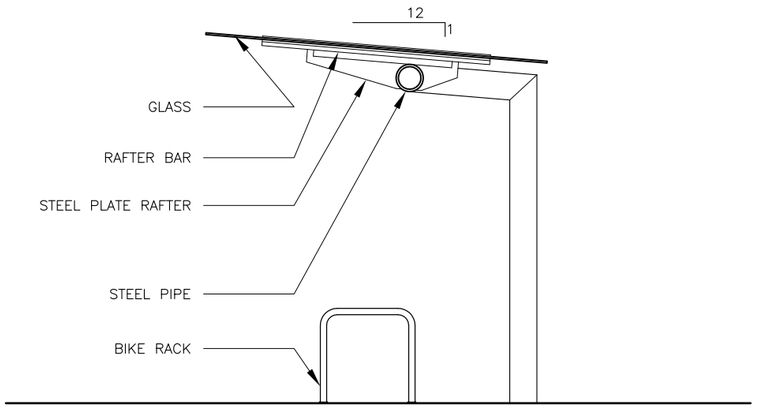
BIKE SHELTER FRONT ELEVATION 4
1/4" = 1'-0" A15E-740



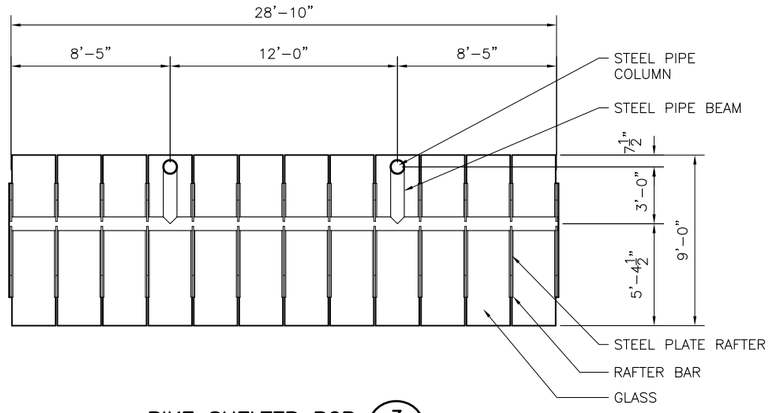
BIKE SHELTER SIDE ELEVATION 6
1/4" = 1'-0" A15E-740



BIKE SHELTER ROOF PLAN 2
1/4" = 1'-0" A15E-740



BIKE SHELTER SECTION 5
1/2" = 1'-0" A15E-740



BIKE SHELTER RCP 3
1/4" = 1'-0" A15E-740

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12				ISSUED FOR CONSTRUCTION

MM DESIGNED	05-09-11	DATE
MH DRAWN	05-09-11	DATE
WB CHECKED	11-07-11	DATE
APPROVED	05-14-12	DATE

REGISTERED ARCHITECT · JON C. GARNER · PORTLAND, OREGON · STATE OF OREGON · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, Interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	05-14-12		05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
BIKE SHELTER
PLAN, SECTION, ELEVATION AND DETAILS

Exhibit T 32

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS SHOWN	A15E-740	RH100544JB	

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\700_Auxiliary Buildings\A15E-740.dwg Mar. 20, 2012 - 9:28 AM meredith hendricks
Plot Date:3/20/2012 2:50 PM meredith hendricks

LOCATION	PLATFORM SHELTER		SHELTER WINDSCREEN			TVM SHELTER		LIGHT POLE				CCTV POLE	BENCH		TRASH RECEPTACLE	EMERGENCY PHONE	BIKE RACK	ART ENCLOSURE	SIGN								
STATION	TYPE 1A	TYPE 2A	TYPE 1A	TYPE 1B	TYPE 1C	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE 3	TYPE 4		TYPE 1	TYPE 2					TYPE A1	TYPE B1	TYPE B2	TYPE C1	TYPE D1	TYPE E1	TYPE F1	TYPE G1	TYPE H1
LINCOLN ST/SW 3RD AVE	1			1		2		2	3				1	1	2	1			6	2		1	4				2
SOUTH WATERFRONT/SW MOODY AVE (NB)	2		2			2		2		3				3	2	1		1	3	2		2	4			1	2
SOUTH WATERFRONT/SW MOODY AVE (SB)	2		2			2		2		3				3	2	1		1	3	2		2	4			1	2
OMSI/SE WATER AVE (NB)	2		2			2		3		3		1		3	2	1	3	1	4		2	2	4			1	2
OMSI/SE WATER AVE (SB)	2		2			2		3		3		2		3	2	1	9	1	4		2	2	4			1	2
CLINTON/SE 12TH AVE		1			1	2		6	3			2	1	1	2	1	26		6		2	1	4				2
SE 17TH AVE & RHINE ST		1		1		2		3	3		1	1	1	1	2	1	4		6		2	1	4				2
SE 17TH AVE & HOLGATE BLVD		1			1	2		2	3		2		1	1	2	1	8		6		2	1	4				2
SE BYBEE BLVD	1				1			2	3				1	1	4	1	29		6		2	1	4		2		2
SE TACOMA ST/JOHNSON CREEK		1			1	2		6	3		1		1	1	2	1	17		6		2	1	4	1			2
MILWAUKIE/MAIN ST	1			1		2		5	3				1	1	2	1	12		6		2	1	4				2
SE PARK AVE	1			1		2	2	6	6		2		1	3	2	1	6		6		4	1	8				2
TOTALS	12	4	8	4	4	22	2	42	27	12	6	6	8	22	26	12	114	4	62	6	20	16	52	1	2	4	24

AMENITIES MATRIX

90% FINAL DESIGN
2-2-12

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12 DATE	
EAC DRAWN	01-27-12 DATE	
KHF CHECKED	01-27-12 DATE	
APPROVED	DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

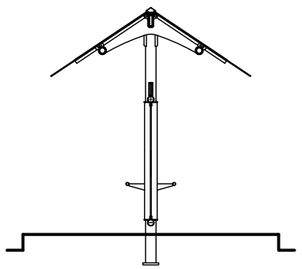
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
AMENITIES MATRIX

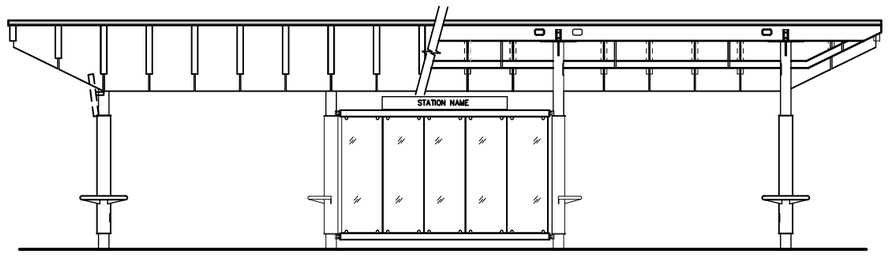
Exhibit T 33

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	G15N-002	RH100186JB	

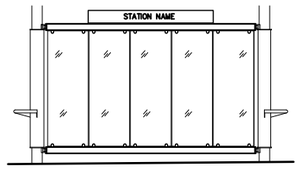
NOTES:
1. SEE A15S–002 SCHEDULE
2. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E–006, A15W–003



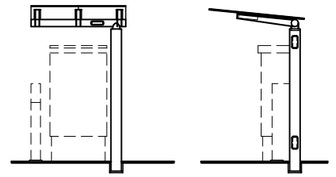
GLASS ROOF PLATFORM SHELTER – TYPE 1A
REF A15S–011



GLASS ROOF PLATFORM SHELTER – TYPE 1A
REF A15S–010



WINDSCREEN – TYPE 1A (W/O WINGS AND BENCH)
REF A15S–030



TVM SHELTER – TYPE 1
REF A15S–040

PLATFORM SHELTER & WINDSCREEN FAMILY

1

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01–27–12 DATE
JFC	DRAWN	01–27–12 DATE
RAH	CHECKED	03–19–12 DATE
KHF	APPROVED	03–23–12 DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 34
PLATFORM SHELTER, WINDSCREEN & TVM SHELTER FAMILY

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
					A15S–001	RH100186JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-001.dwg Mar 22, 2012 1:33pm jcarlson

NOTES:

1. PLATFORM SLOPE VARIES. SEE PMLR EAST & WEST CIVIL PLANS AND FIELD VERIFY.
2. REF. A15S-001 FOR PLATFORM SHELTER, WINDSCREEN & TVM SHELTER TYPES.
3. REF. A15S-021 FOR LEANING RAIL TYPES.

			PLATFORM SHELTER				WINDSCREEN
STATION	REF. DWG.	PLATFORM SLOPE	TYPE	QTY.	COLOR	LEANING RAIL	TYPE
LINCOLN ST. / SW 3RD AVE.	A15W-226	3.50	1A	1	P4	2	1A
SOUTH WATERFRONT / SW MOODY AVE. (NB)	A15W-227	1.09	1A	2	P4	2	1A
SOUTH WATERFRONT / SW MOODY AVE. (SB)	A15W-228	1.09	1A	2	P4	2	1A
OMSI / SE WATER AVE. (NB)	A15E-400/A15E-401	1.09	1A	2	P4	2	1A
OMSI / SE WATER AVE. (NB)	A15E-400/A15E-401	1.09	1A	2	P4	2	1A
CLINTON / SE 12TH AVE.	A15E-410	0.52	2A	1	P4	1	1C
SE 17TH AVE. & RHINE ST.	A15E-420	0.47	2A	1	P4	1	1B
SE 17TH AVE. & HOLGATE BLVD.	A15E-430	0.12	2A	1	P4	1	1C
SE BYBEE BLVD.	A15E-440	0	1A	1	P4	1	1C
SE TACOMA ST. / JOHNSON CREEK	A15E-450	0.76	2A	1	P4	1	1C
MILWAUKIE / MAIN ST.	A15E-460	1.32	1A	1	P1	1	1B
SE PARK AVE.	A15E-470	3.00	1A	1	P4	1	1B

PLATFORM SHELTER & WINDSCREEN SCHEDULE

1

TVM SHELTER

STATION	REF. DWG.	QTY.	TYPE	MIRROR LAYOUT	COLOR
LINCOLN ST. / SW 3RD AVE.	A15W-220	2	3		P4
SOUTH WATERFRONT / SW MOODY AVE. (NB)	A15W-222	2	1	1	P4
SOUTH WATERFRONT / SW MOODY AVE. (SB)	A15W-224	2	1	1	P4
OMSI / SE WATER AVE. (NB)	A15E-402	2	1	1	P4
OMSI / SE WATER AVE. (NB)	A15E-402	2	1		P4
CLINTON / SE 12TH AVE.	A15E-411	2	1		P4
SE 17TH AVE. & RHINE ST.	A15E-421	2	1		P4
SE 17TH AVE. & HOLGATE BLVD.	A15E-431	2	1		P4
SE TACOMA ST. / JOHNSON CREEK	A15E-451/A153-452	2	1		P4
MILWAUKIE / MAIN ST.	A15E-461/A15E-462	2	1		P1
SE PARK AVE.	A15E-471/A15E-472	4	1		P4

TVM SCHEDULE

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR	DESIGNED	01-27-12 DATE
JFC	DRAWN	01-27-12 DATE
RAH	CHECKED	03-19-12 DATE
KHF	APPROVED	03-23-12 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

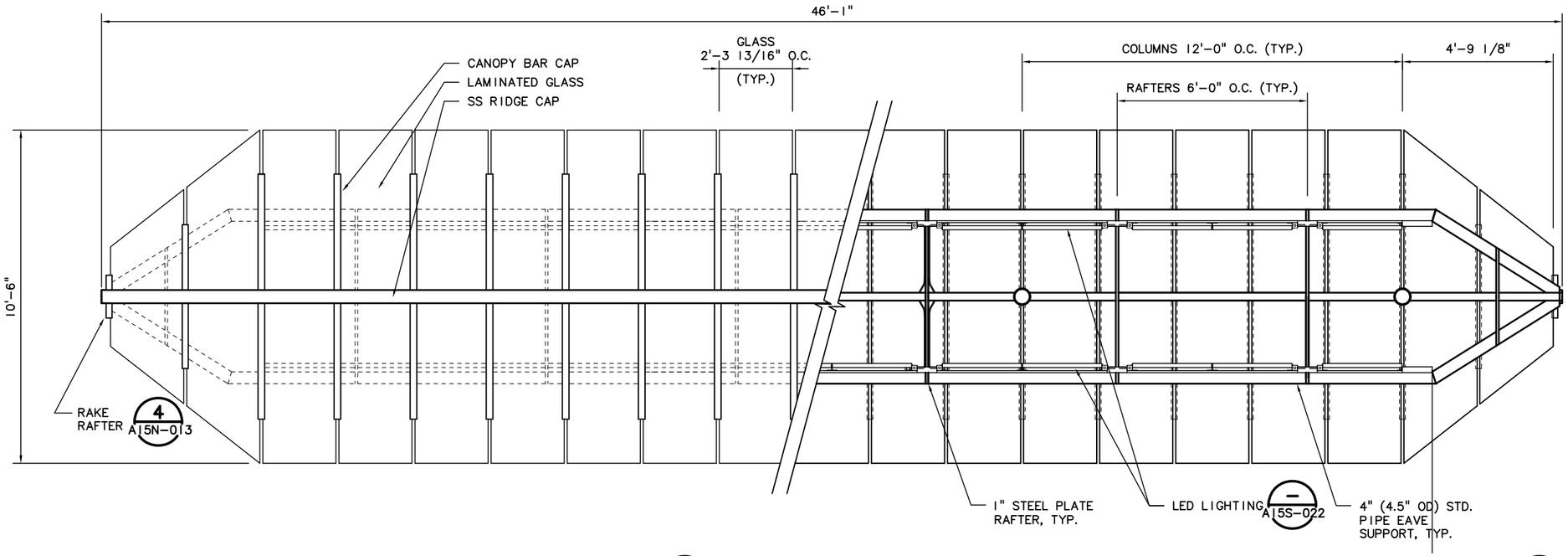
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 35
PLATFORM SHELTER, WINDSCREEN & TVM SHELTER SCHEDULE

SCALE: AS NOTED | DRAWING NO.: A15S-002 | CONTRACT NO.: RH100186JB | SHEET NO.:

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-002.dwg Mar 22, 2012 10:52pm jcarlson

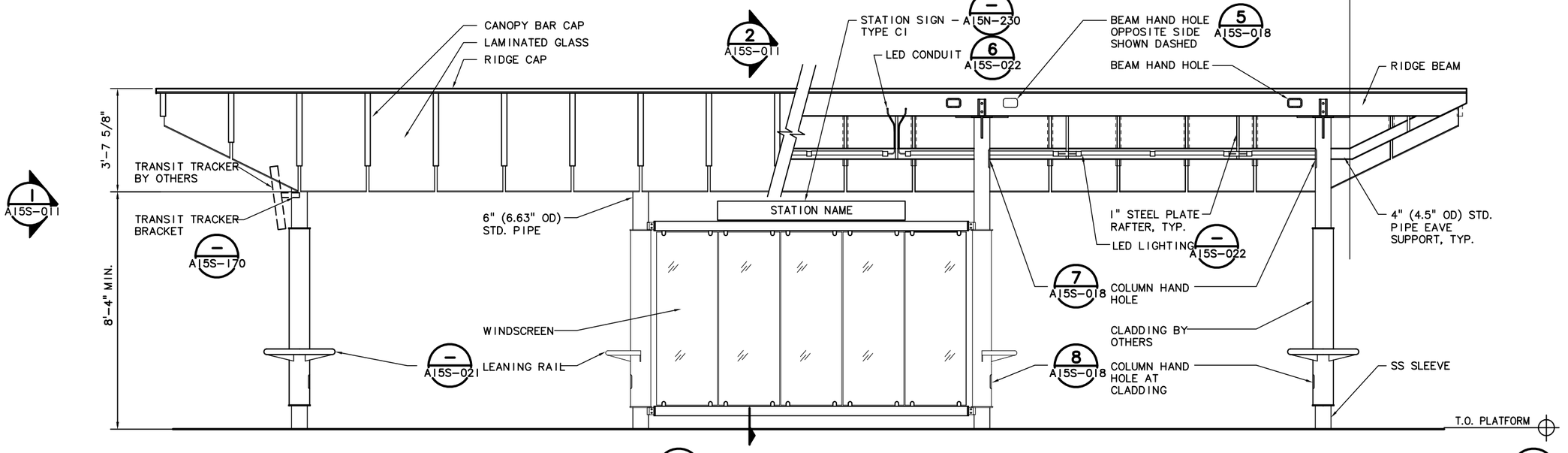


TYPE 1A – GLASS ROOF PLAN
SCALE: 1/2" = 1'-0"

1

TYPE 1A – GLASS ROOF REFLECTED CEILING PLAN
SCALE: 1/2" = 1'-0"

2



TYPE 1A – SIDE ELEVATION
SCALE: 1/2" = 1'-0"

3

TYPE 1A – LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"

4

NOTES:

1. PLATFORM SLOPE VARIES. SEE PMLR EAST & WEST CIVIL PLANS AND FIELD VERIFY.
2. COLUMNS SHALL BE PLUMB WITH ROOF AND WINDSCREEN STRUCTURE LEVEL REGARDLESS OF PLATFORM SLOPE.
3. 2 HAND HOLES PER SHELTER COLUMN.
4. SEE A15S-002 SHELTER SCHEDULE FOR WINDSCREEN TYPE, LEANING RAIL TYPE AND PAINT COLOR.
5. SEE PMLR EAST & WEST ARCHITECTURAL PLANS FOR TRANSIT TRACKER LOCATION AND WINDSCREEN CONFIGURATION.
6. ALL MILD STEEL COMPONENTS PAINTED, EXCEPT AS NOTED.
7. ELECTRICAL TO LIGHT FIXTURES BY OTHERS. REF. PMLR EAST & WEST SEGMENT ELECTRICAL DRAWINGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

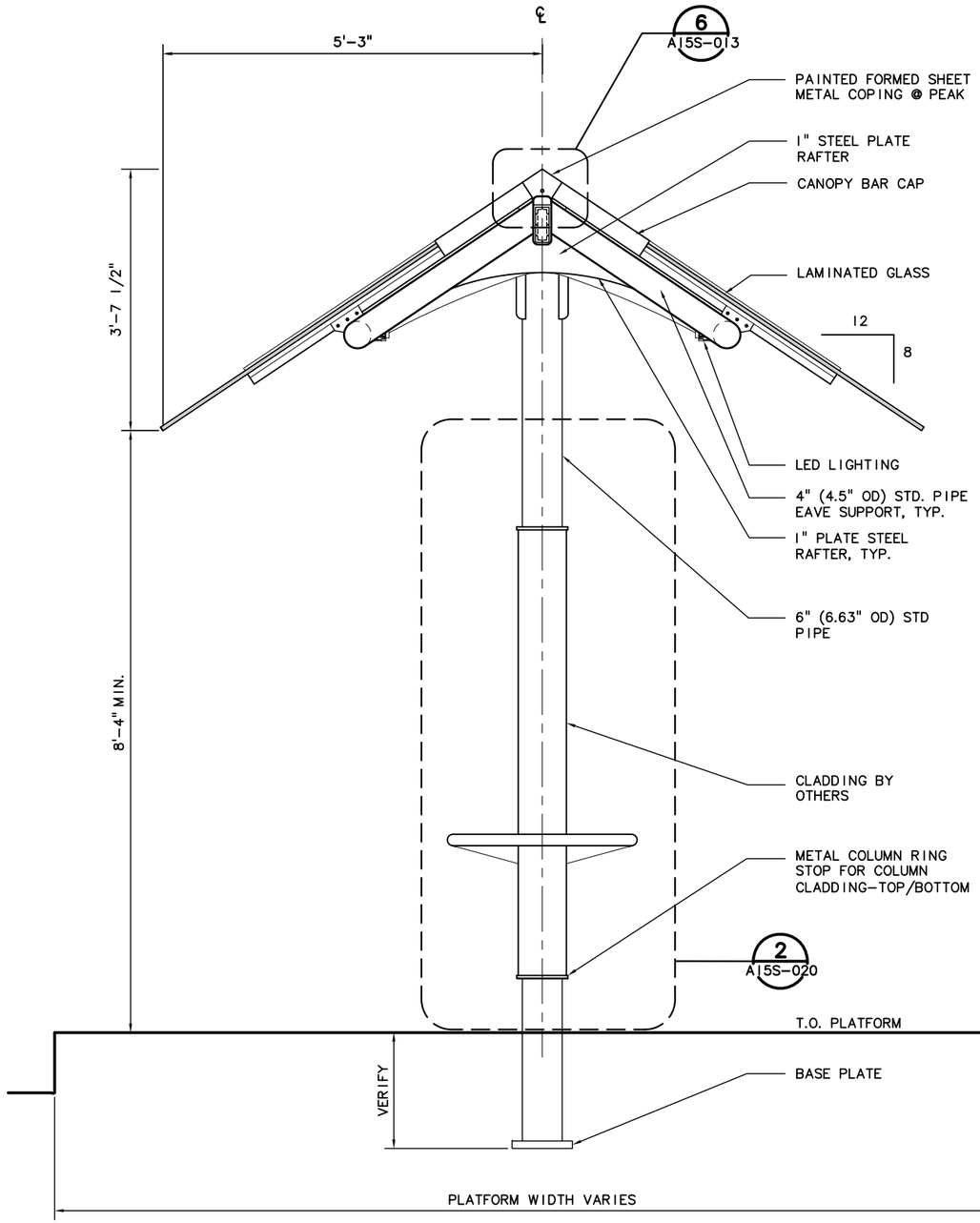
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

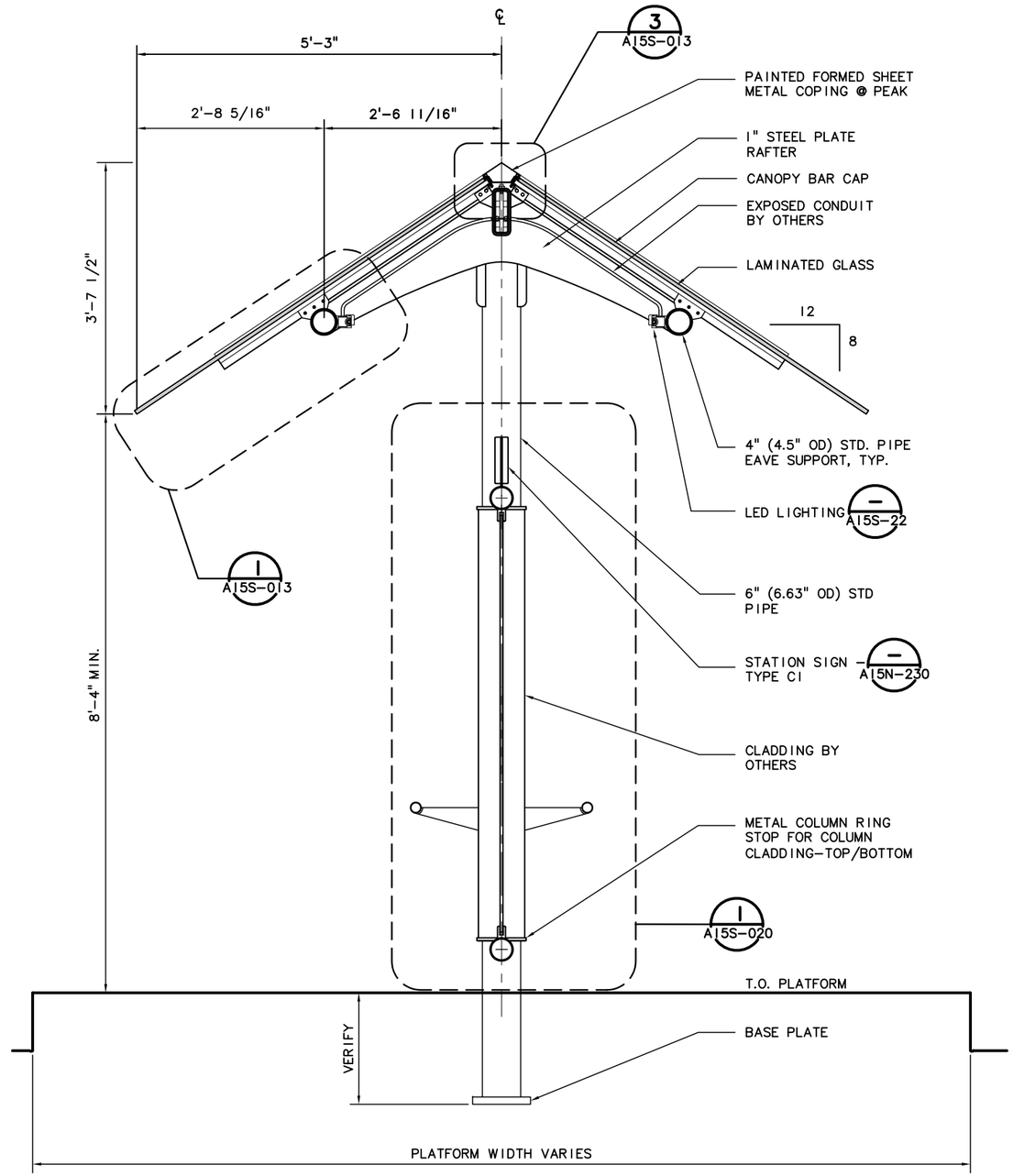
PORTLAND TO MILWAUKIE LRT
AMENITIES
PLATFORM SHELTER – TYPE 1A
PLAN & ELEVATION

Exhibit T 36

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-010	RH100186JB	



TYPE A1 – ELEVATION END VIEW
SCALE: 1" = 1'-0"
1



TYPE A1 – SECTION
SCALE: 1" = 1'-0"
2

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01-27-12 DATE
JFC	DRAWN	01-27-12 DATE
RAH	CHECKED	03-19-12 DATE
KHF	APPROVED	03-23-12 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

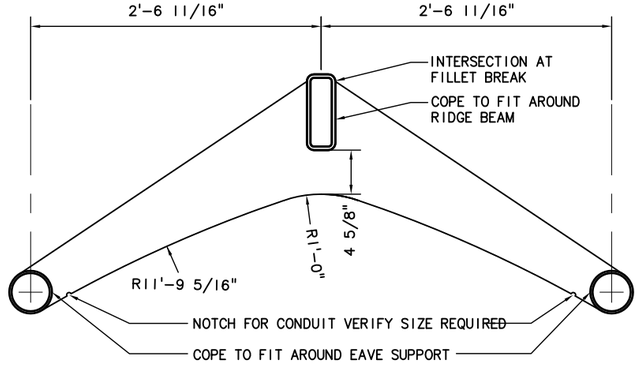
SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
PLATFORM SHELTER – TYPE 1A
ELEVATION & SECTION

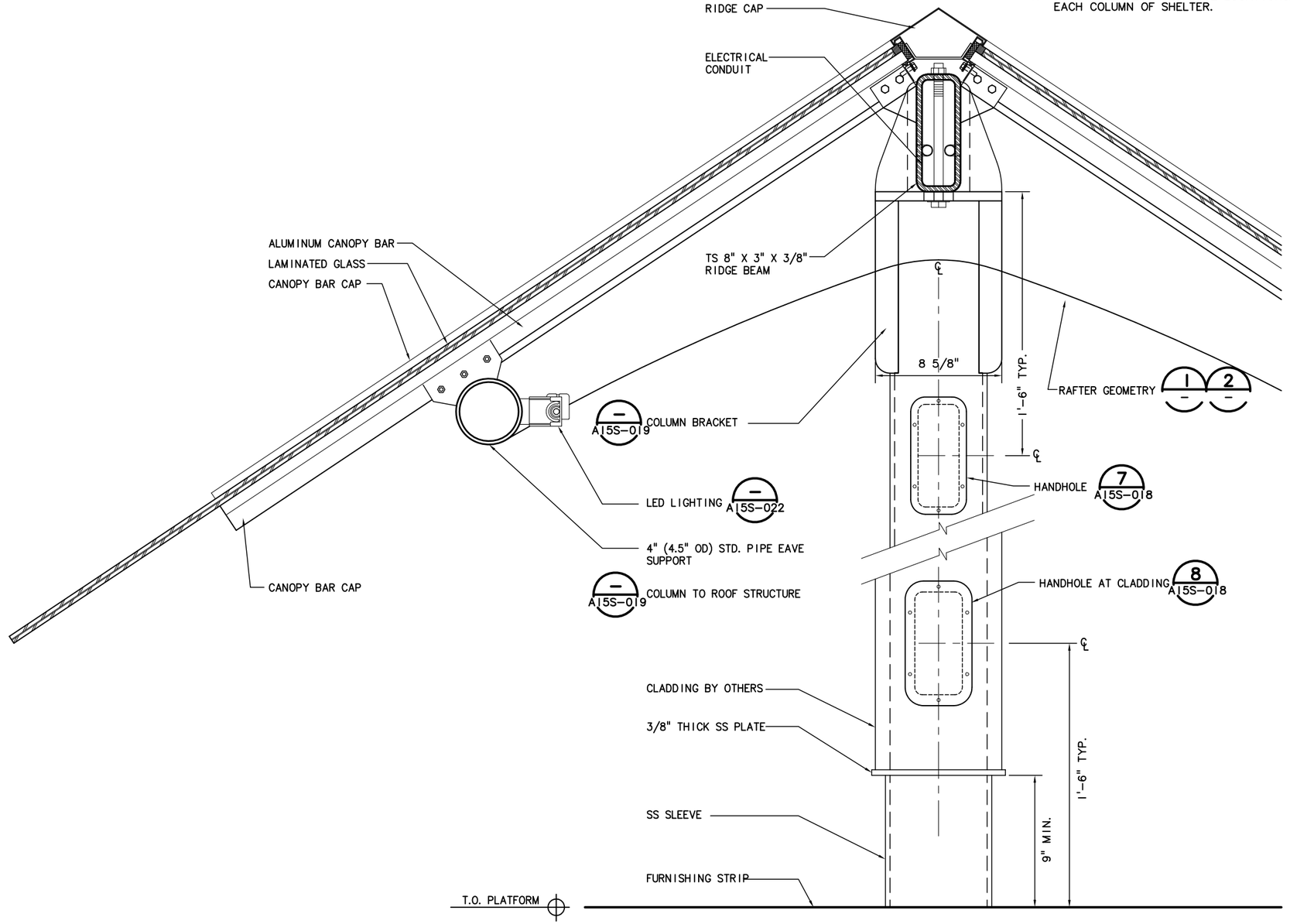
Exhibit T 37

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-011	RH100186JB	

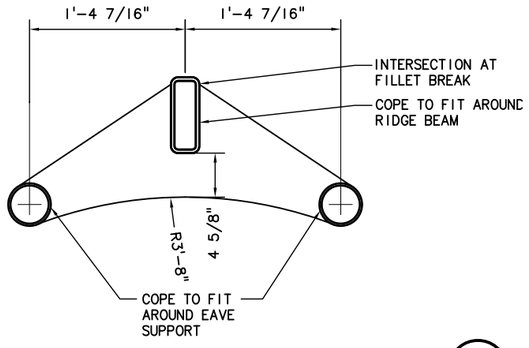
NOTES:
1. HAND HOLES LOCATED AT 2 LOCATIONS, EACH COLUMN OF SHELTER.



TYPE 1A – COPING AT TYPICAL RAFTER 1
SCALE: 1 1/2" = 1'-0"



TYPE 1A – SHELTER DETAIL 3
SCALE: 3" = 1'-0"



TYPE 1A – COPING AT END RAFTER END 2
SCALE: 1 1/2" = 1'-0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

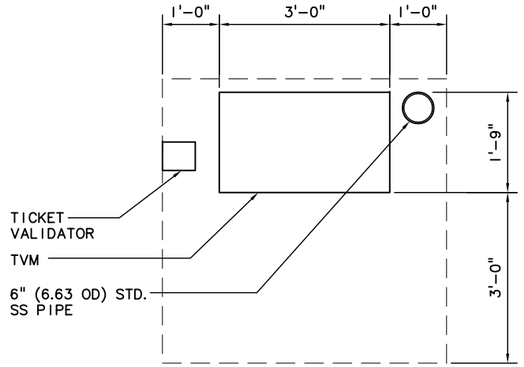
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

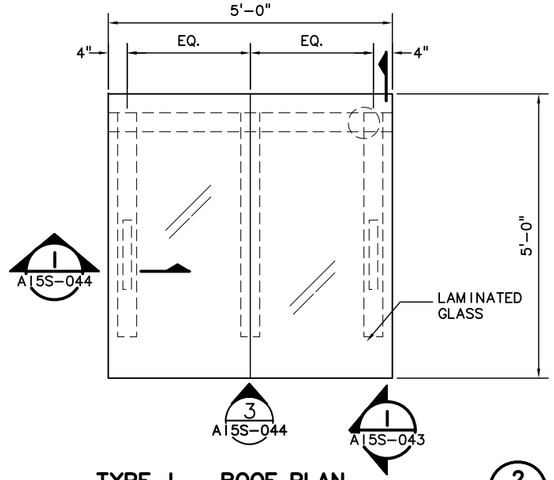
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 38
PLATFORM SHELTER – TYPE 1A
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-012	RH100186JB	

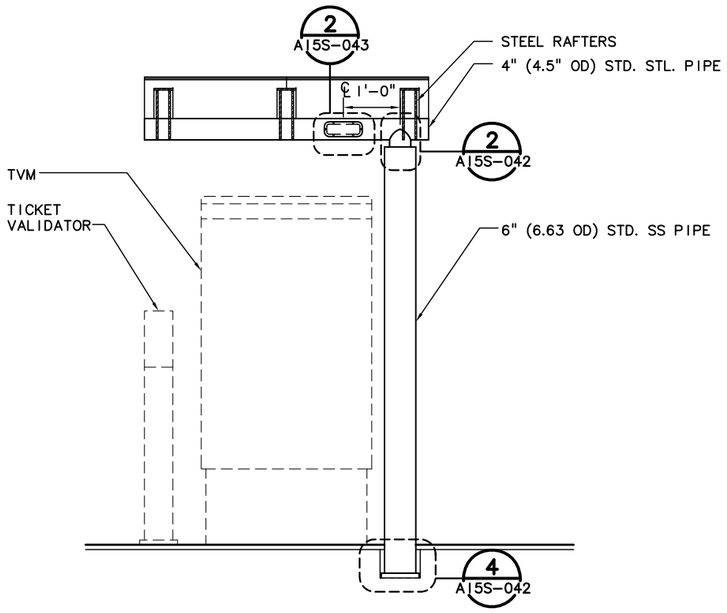
M:\2_VC PROJECTS\TMA\DUTY\2012-03-23 100%\DWGS\A15S-012.dwg
Mar 22, 2012 11:07pm jpartson



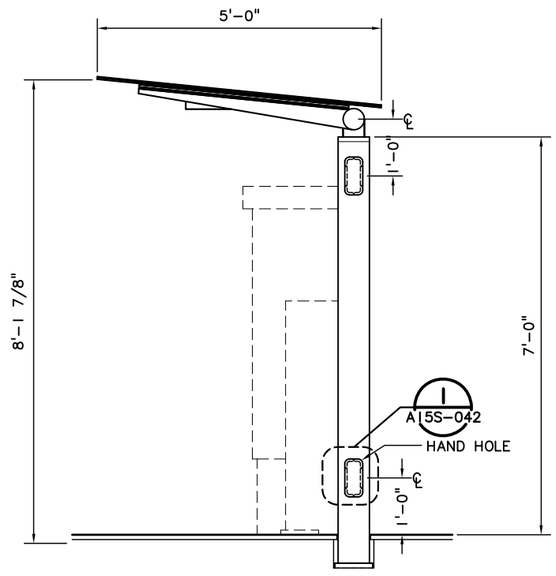
TYPE I – EQUIPMENT PLAN (1)
SCALE: 3/4" = 1'-0"



TYPE I – ROOF PLAN (2)
SCALE: 3/4" = 1'-0"



TYPE I – FRONT ELEVATION (3)
SCALE: 3/4" = 1'-0"



TYPE I – SIDE ELEVATION (4)
SCALE: 3/4" = 1'-0"

NOTES:

1. ROOF DIMENSIONS INDICATE MINIMUM ROOF OVERHANG CLEARANCE AT TVM.
2. MIRROR LAYOUT WITH SUPPORT COLUMN ON LEFT WHERE INDICATED ON SHELTER SCHEDULE. REF. A15S-002
3. TVM AND TICKET VALIDATOR OWNER FURNISHED.
4. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST AND WEST SEGMENT DRAWINGS.
5. ELECTRICAL & LIGHT FIXTURES BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12 DATE	
EAC DRAWN	01-27-12 DATE	
RAH CHECKED	03-19-12 DATE	
KHF APPROVED	03-23-12 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

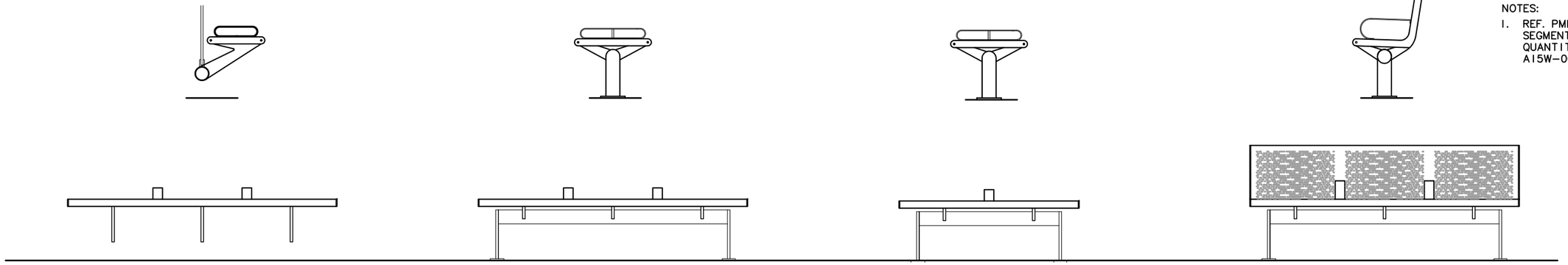
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 39
TVM SHELTER – TYPE I
PLAN & ELEVATION

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
				AS NOTED	A15S-040	RH100186JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-040.dwg
Mar 22, 2012 3:15pm
bmartin

NOTES:
1. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E-006, A15W-003.

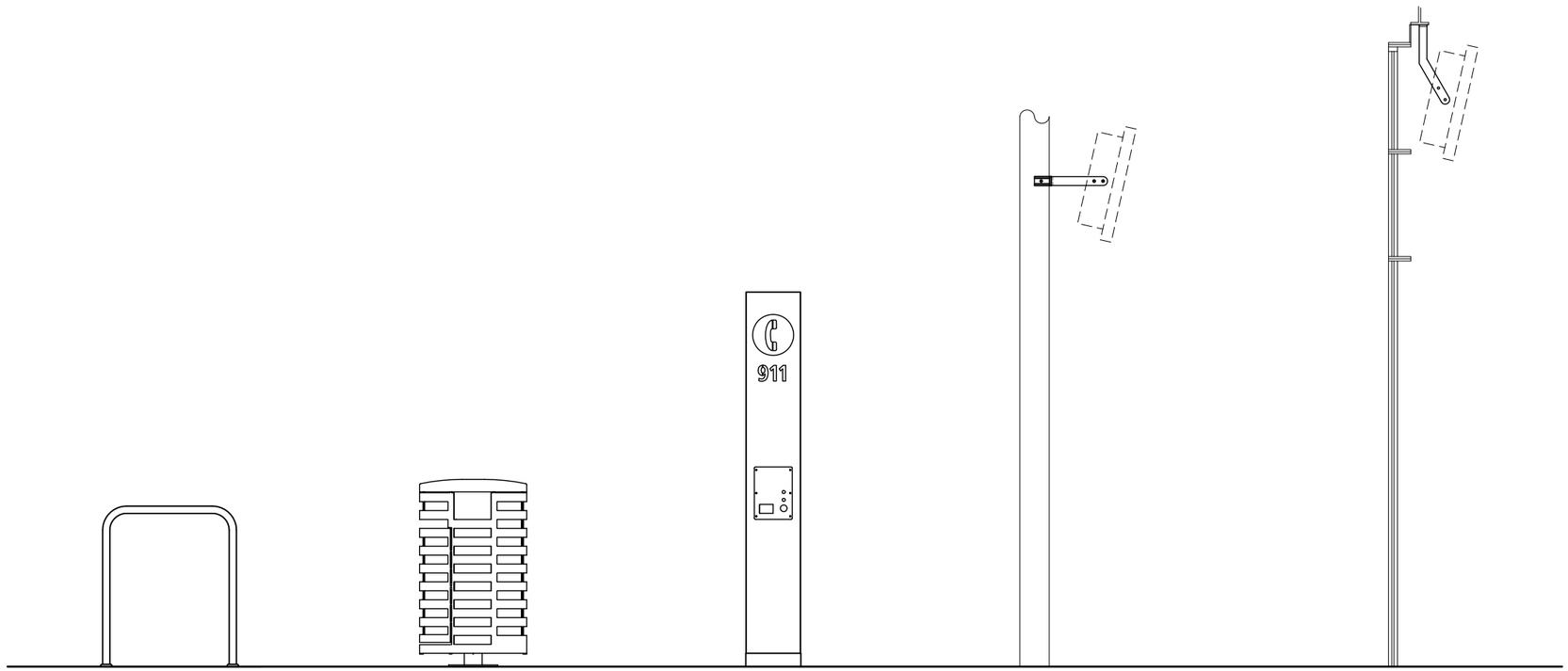


BENCH – TYPE 1
WINDSCREEN MOUNTED
REF. A15S-110

BENCH – TYPE 2
FREESTANDING, 3 SEAT
REF. A15S-111

BENCH – TYPE 3
FREESTANDING, 2 SEAT
REF. A15S-112

BENCH – TYPE 4
FREESTANDING, 3 SEAT W/ BACK
REF. A15S-114



BIKE RACK
REF. A15S-134

TRASH RECEPTACLE
REF. A15S-120

EMERGENCY PHONE
REF. A15S-130

TRANSIT TRACKER TYPE 1
REF. A15S-170

TRANSIT TRACKER TYPE 2
REF. A15S-171

FURNISHINGS FAMILY

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED 01-27-12 DATE
JFC DRAWN 01-27-12 DATE
RAH CHECKED 03-19-12 DATE
KHF APPROVED 03-23-12 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

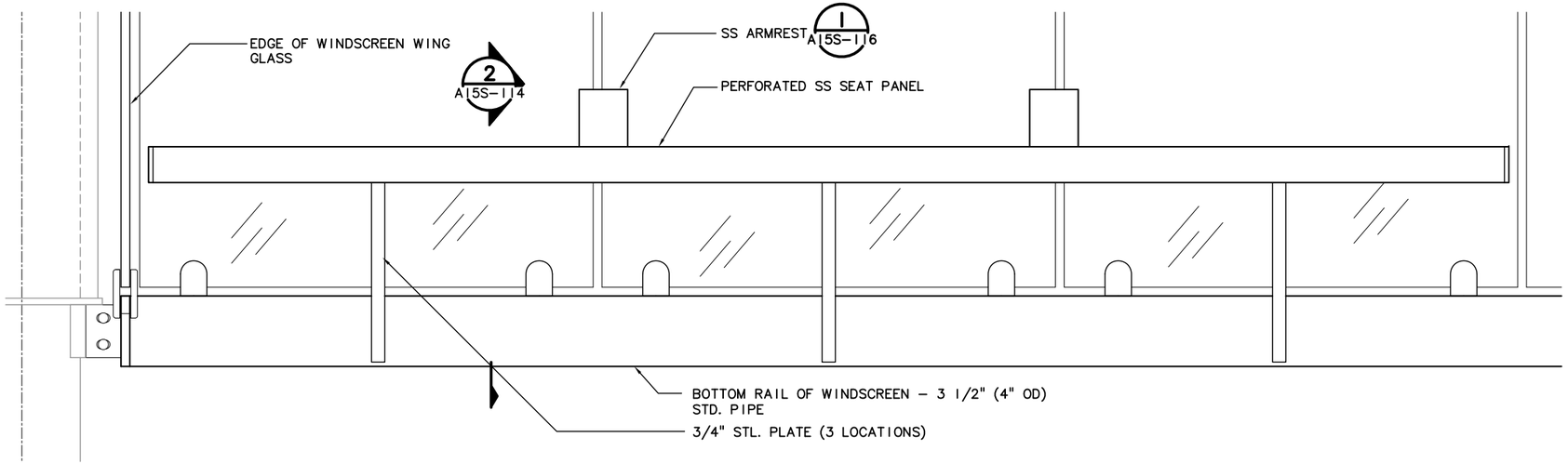
Mayor/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 40
FURNISHINGS FAMILY

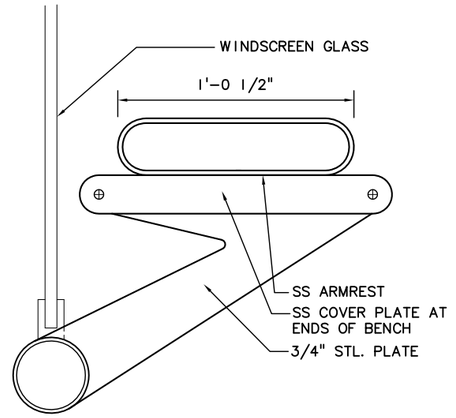
SCALE: AS NOTED | DRAWING NO.: A15S-100 | CONTRACT NO.: RH100186JB | SHEET NO.:



BENCH TYPE I – ELEVATION AT WINDSCREEN

SCALE: 3" = 1'-0"

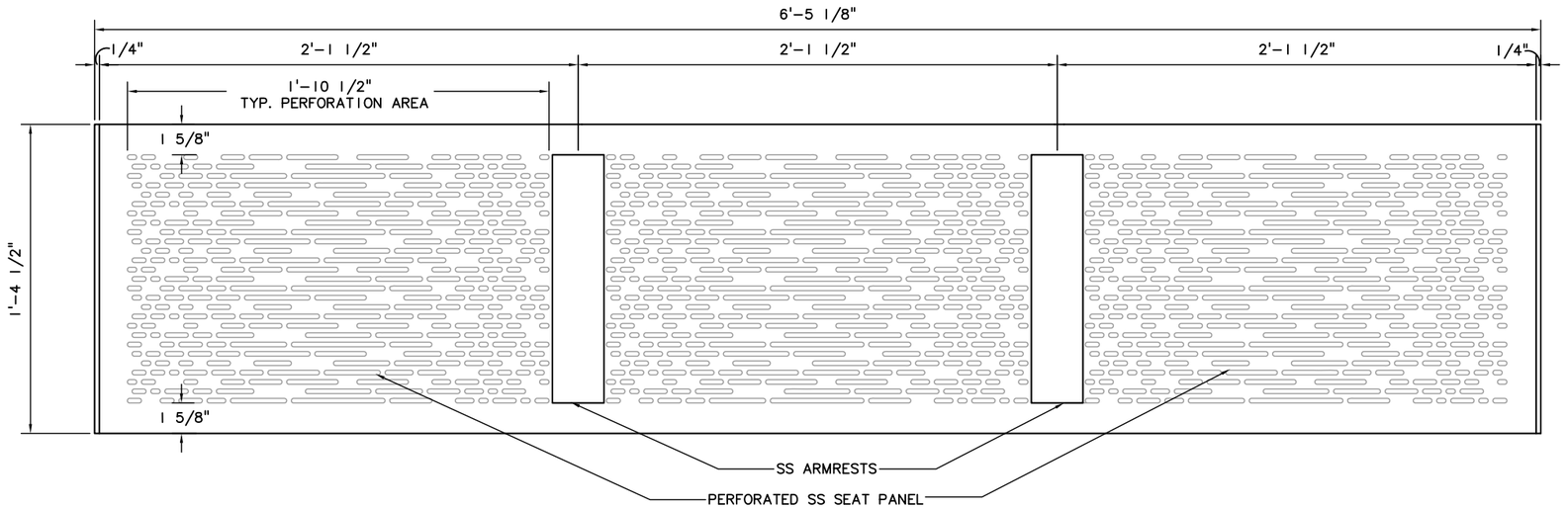
1



BENCH TYPE I – END ELEVATION

SCALE: 3" = 1'-0"

2



BENCH TYPE I – PLAN

SCALE: 3" = 1'-0"

3

NOTES:

1. FINISH ALL STEEL BENCH COMPONENTS WITH ABRASION RESISTANT COATING EXCEPT AS NOTED. COLOR TO MATCH WINDSCREEN.
2. STAINLESS STEEL FINISH AS SPECIFIED.
3. PERFORATED PATTERN DIGITAL ARTWORK PROVIDED BY OWNER.

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

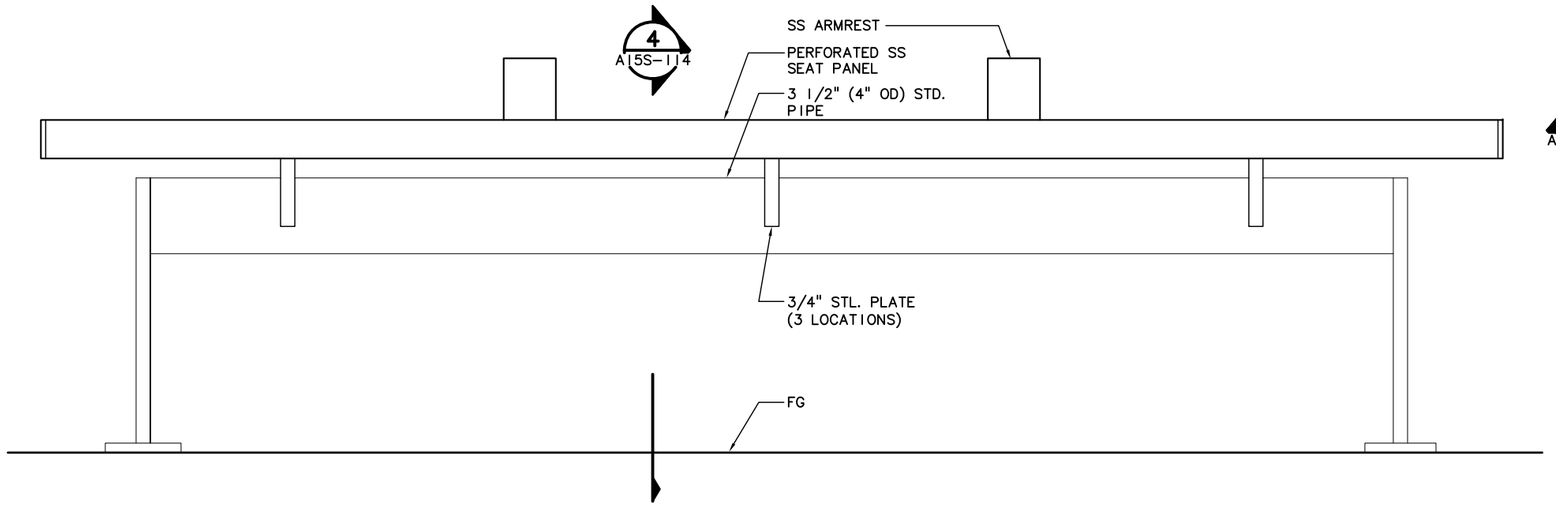
Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

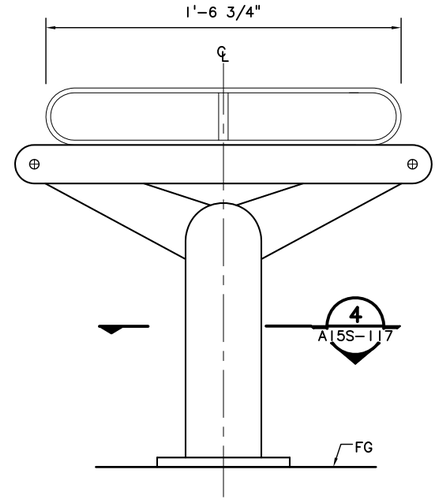
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 41
BENCH – TYPE I
PLAN & ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-110	RH100186JB	



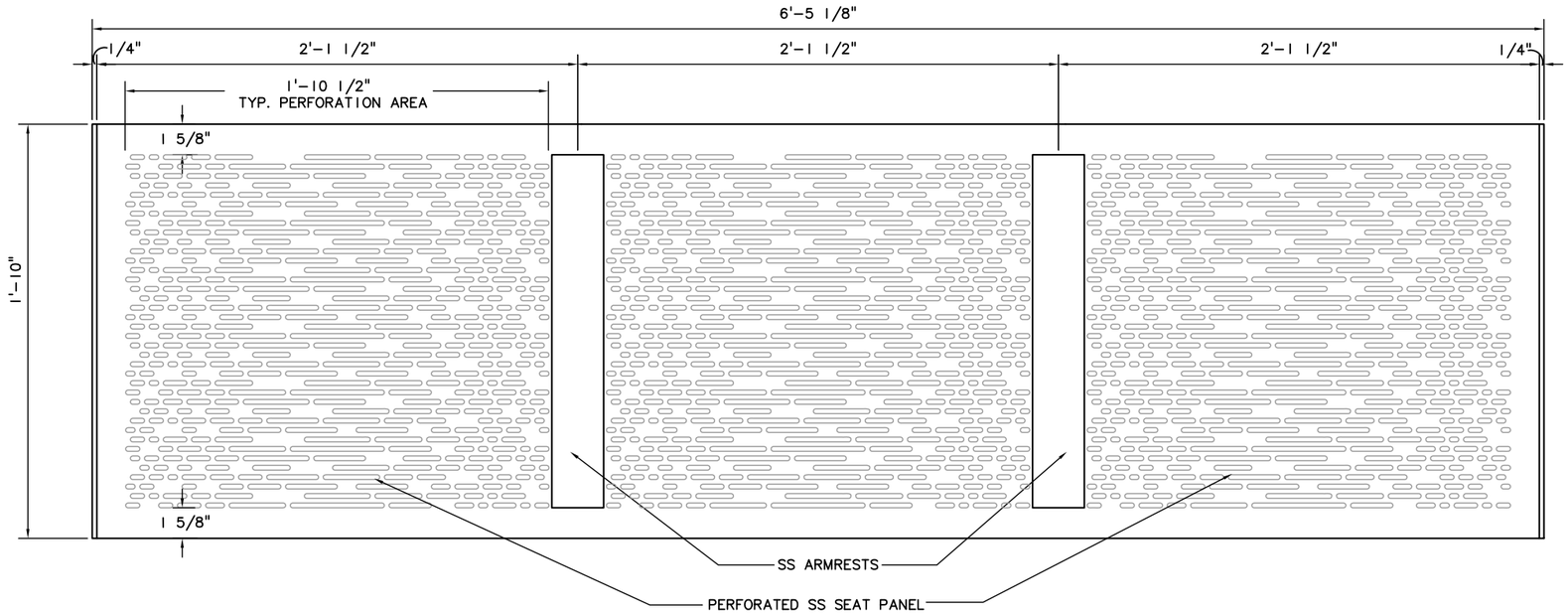
BENCH TYPE 2 – ELEVATION
SCALE: 3" = 1'-0"

1



BENCH TYPE 2 – END ELEVATION
SCALE: 3" = 1'-0"

2



BENCH TYPE 2 – PLAN
SCALE: 3" = 1'-0"

3

NOTES:

1. FINISH ALL STEEL BENCH COMPONENTS WITH ABRASION RESISTANT COATING EXCEPT AS NOTED. COLOR TO MATCH WINDSCREEN.
2. STAINLESS STEEL FINISH AS SPECIFIED.
3. PERFORATED PATTERN DIGITAL ARTWORK PROVIDED BY OWNER.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

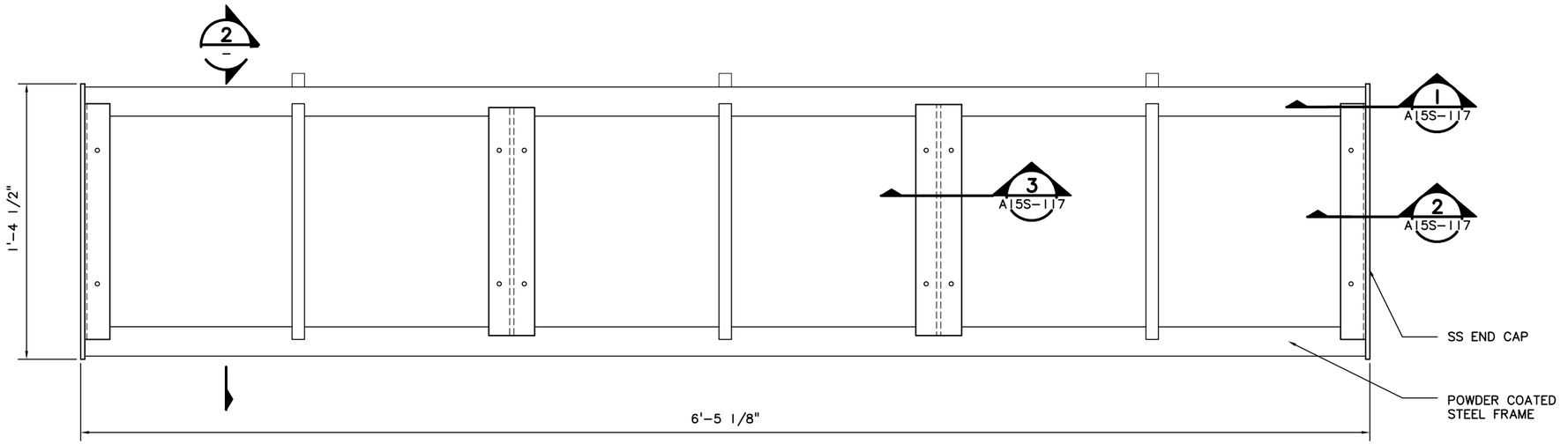
Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

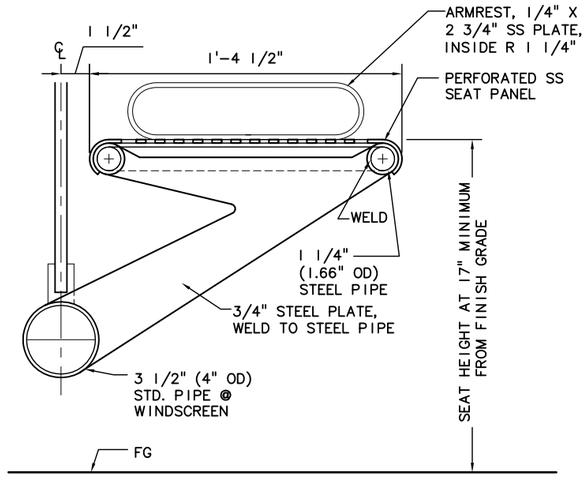
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 42
BENCH – TYPE 2
PLAN & ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-111	RH100186JB	



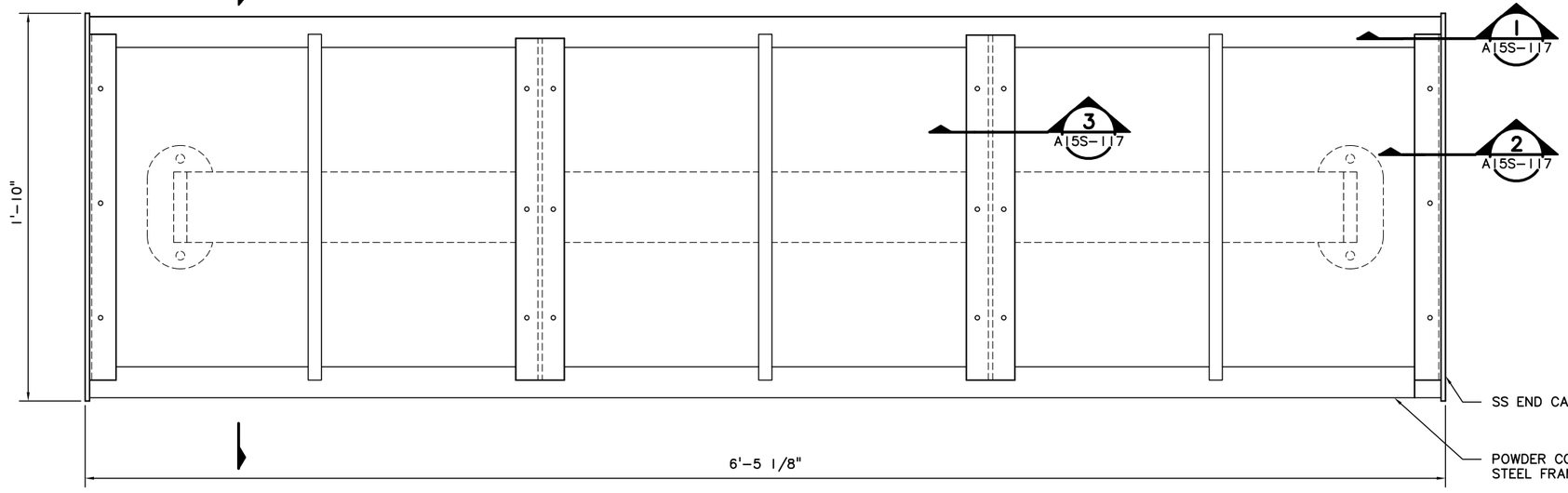
BENCH TYPE 1 – FRAME PLAN
SCALE: 3" = 1'-0"

1



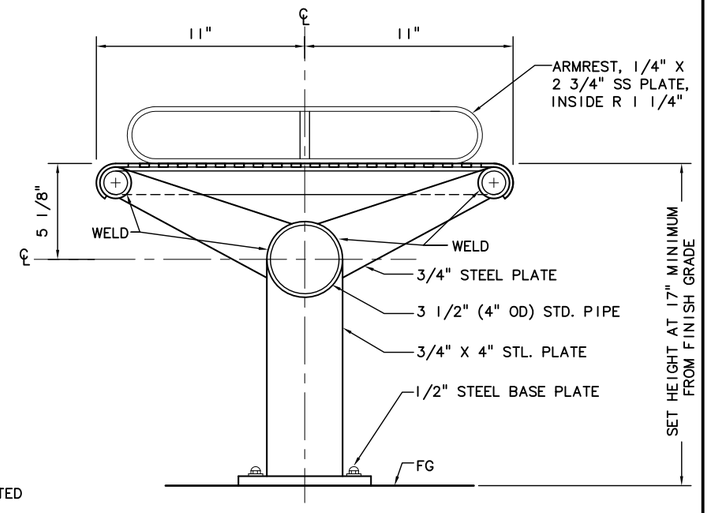
BENCH TYPE 1 – SECTION
SCALE: 3" = 1'-0"

2



BENCH TYPE 2 – FRAME PLAN
SCALE: 3" = 1'-0"

3



BENCH TYPE 2 – SECTION
SCALE: 3" = 1'-0"

4

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

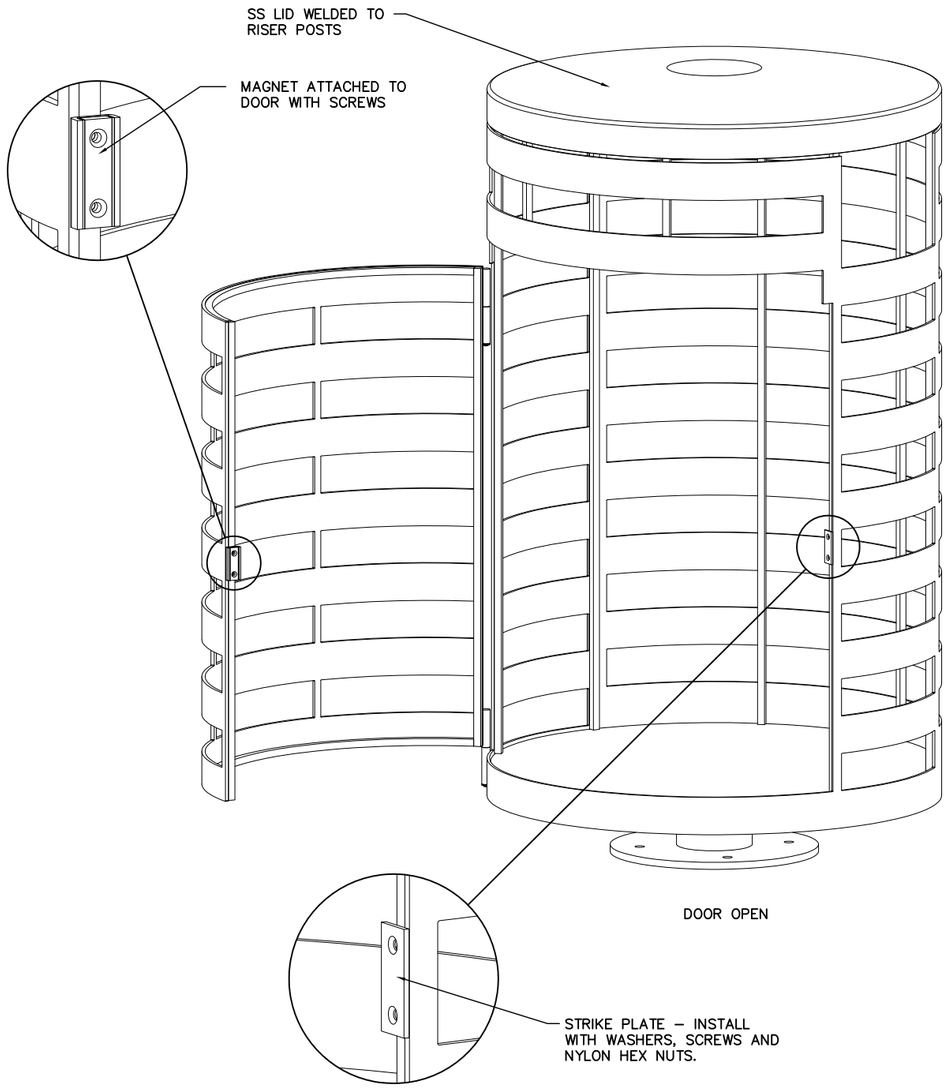
SUBMITTED:	DATE:	APPROVED:	DATE:

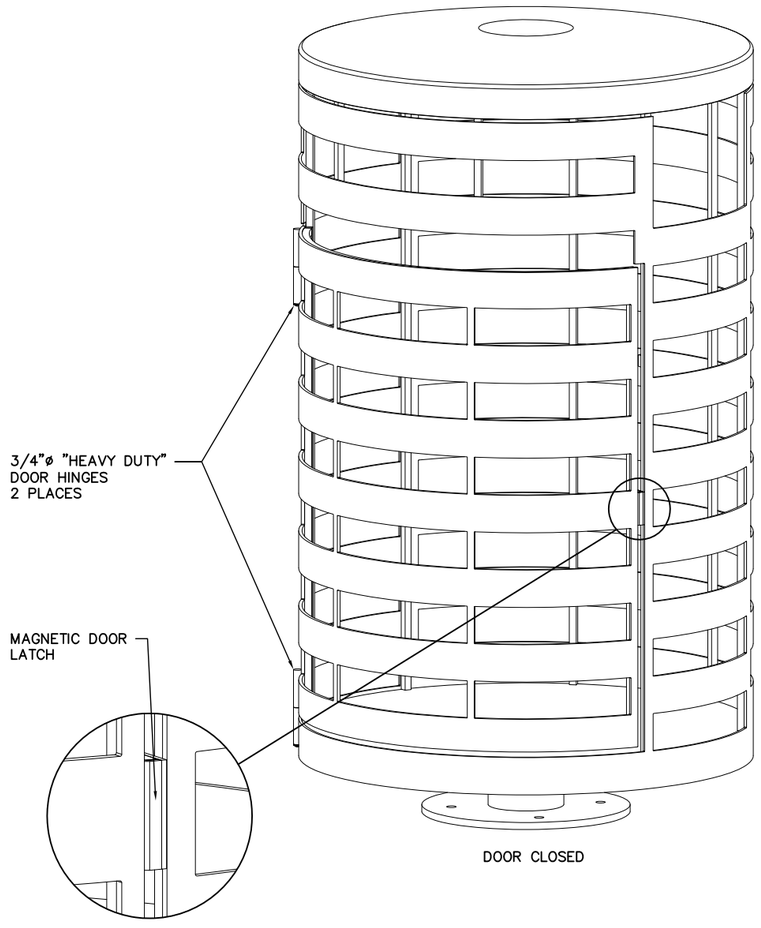
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 43
BENCH – TYPE 1 & 2
FRAME PLAN & SECTION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-114	RH100186JB	

NOTES:

1. POWDERCOAT COLOR MATCH TO PLATFORM SHELTER COLOR. REF. A15S–002
2. NON–CORROSIVE ANCHORING HARDWARE SUPPLIED BY OTHERS.
3. PROVIDE (2) CLEAR 36 GALLON PLASTIC LINERS PER TRASH RECEPTACLE.





TRASH RECEPTACLE – PERPECTIVE

SCALE: NTS

1

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
EAC DRAWN	01–27–12	DATE
RAH CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
TRASH RECEPTACLE – TYPE 1

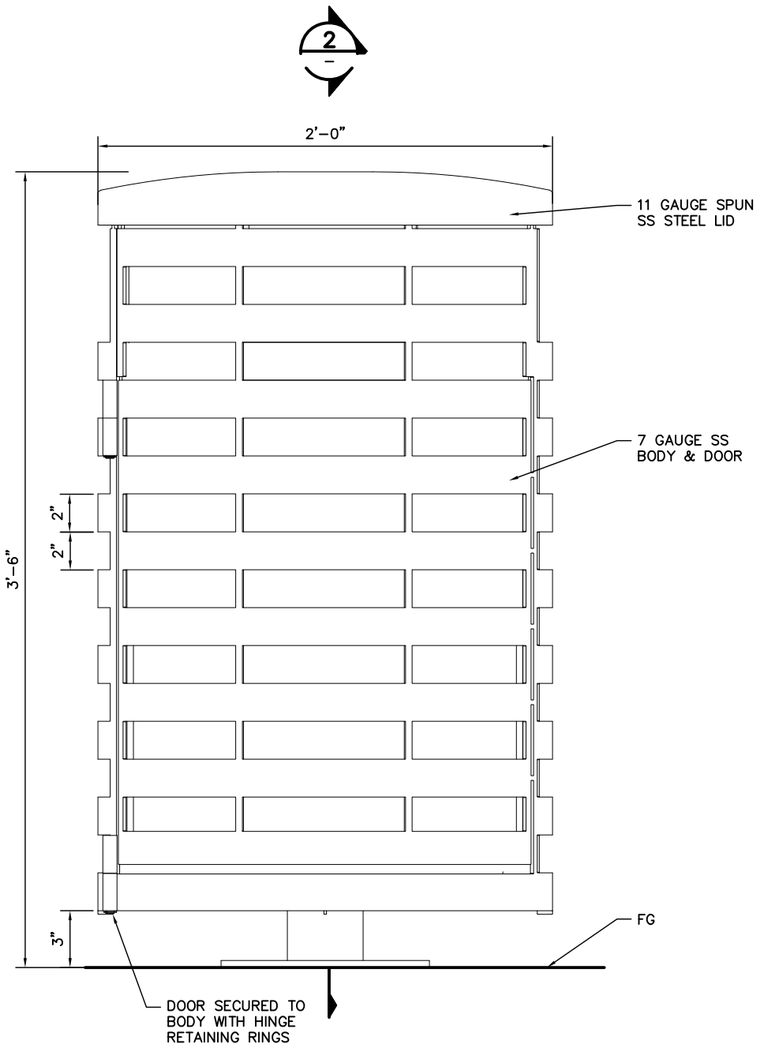
Exhibit T 44

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S–120	RH100186JB	

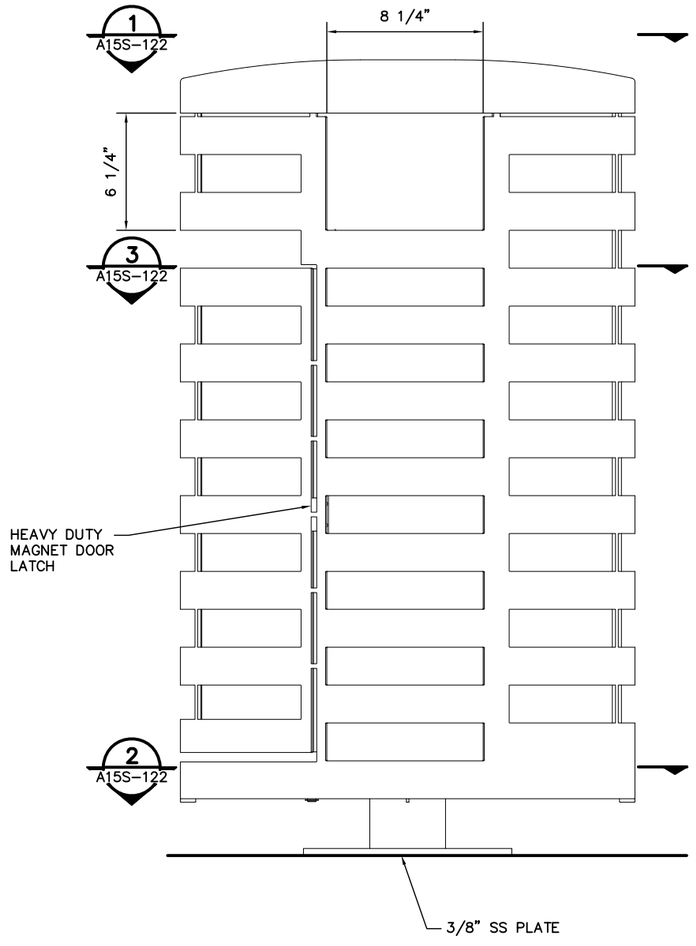
W:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-120.dwg Mar 22, 2012 1:27pm jcarlson

NOTES:

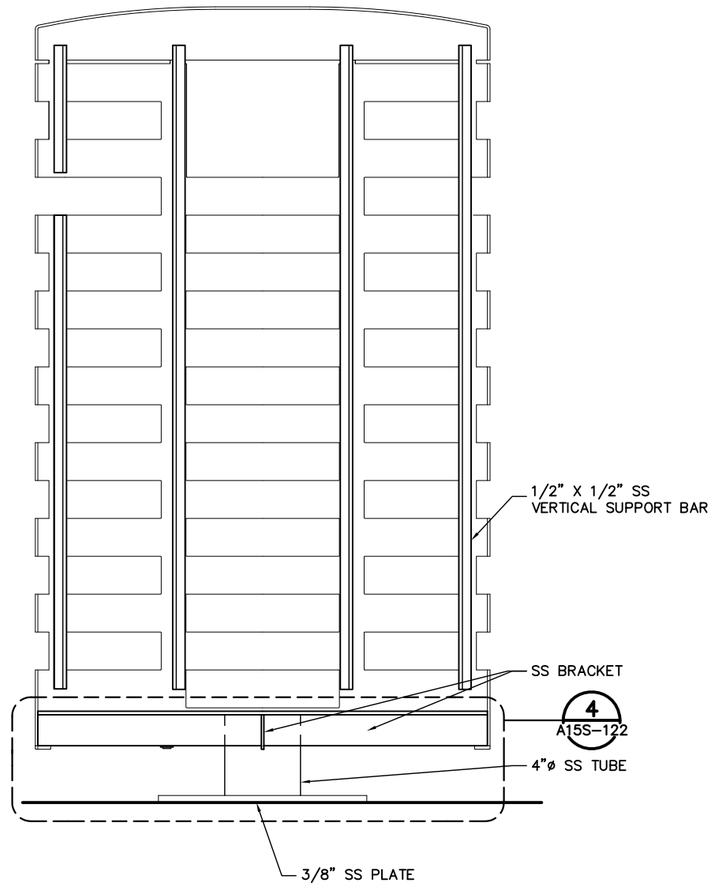
1. POWDERCOAT COLOR MATCH TO PLATFORM SHELTER COLOR. REF. A15S–002
2. NON–CORROSIVE ANCHORING HARDWARE SUPPLIED BY OTHERS.
3. PROVIDE (2) CLEAR 36 GALLON PLASTIC LINERS PER TRASH RECEPTACLE.



TRASH RECEPTACLE – ELEVATION (1)
SCALE: 3" = 1'–0"



TRASH RECEPTACLE – ELEVATION (2)
SCALE: 3" = 1'–0"



TRASH RECEPTACLE – SECTION (3)
SCALE: 3" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
EAC DRAWN	01–27–12	DATE
RAH CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

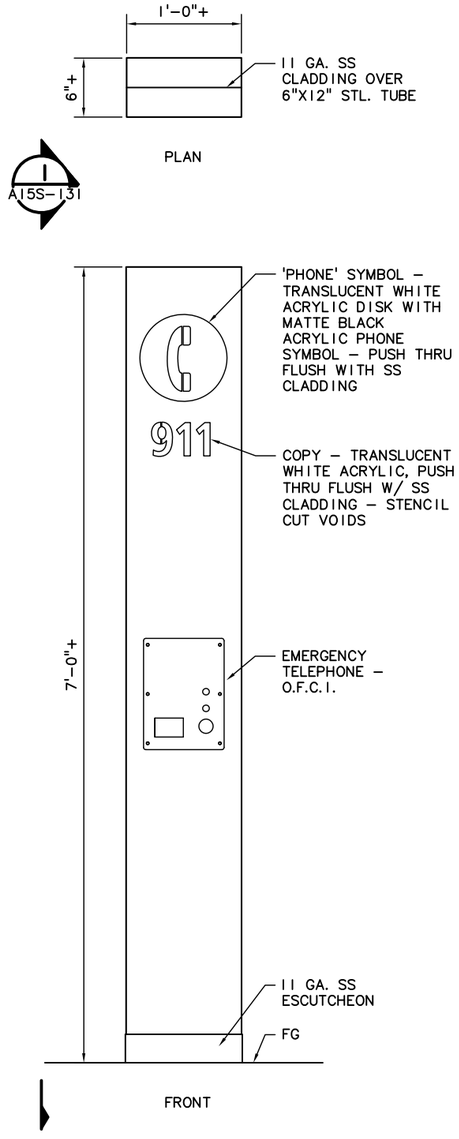
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 45
TRASH RECEPTACLE – TYPE 1
ELEVATION & SECTION

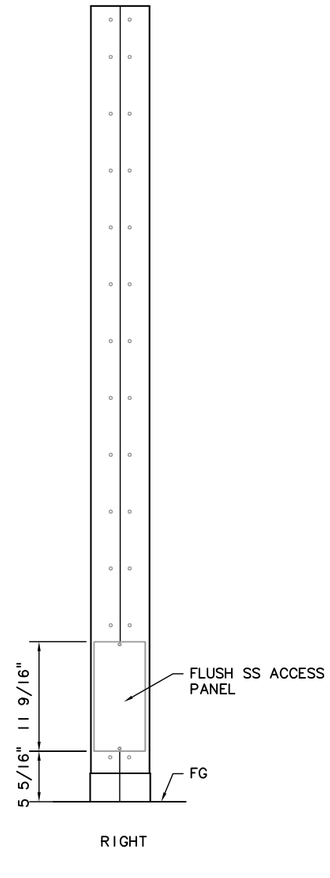
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S–121	RH100186JB	

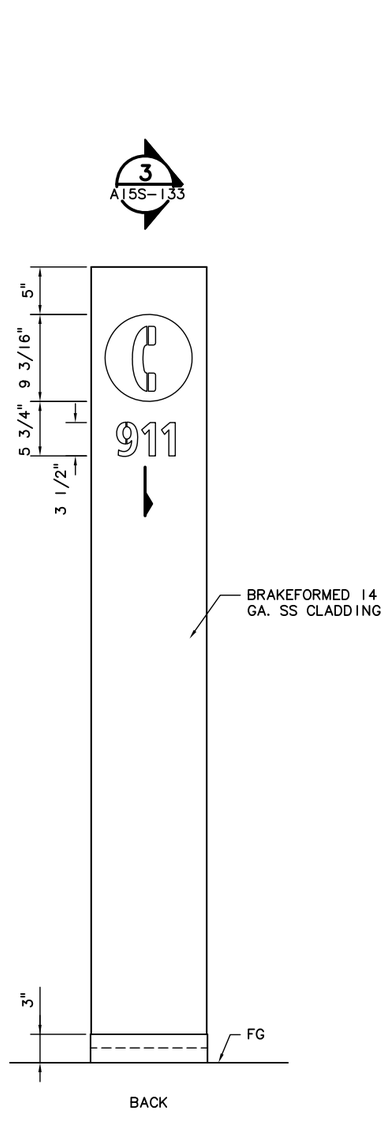
M:\2_VC PROJECTS\TMA\OUT\2012–03–23 100R\DWGS\A15S–121.dwg
Mar 22, 2012 1:28pm
jcarlson

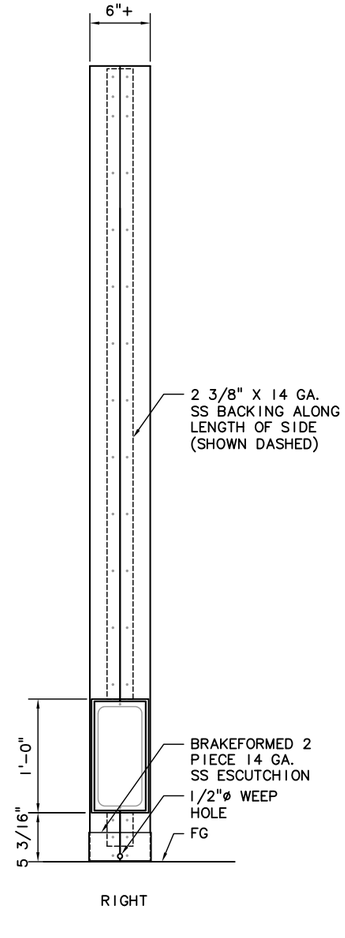
NOTES:

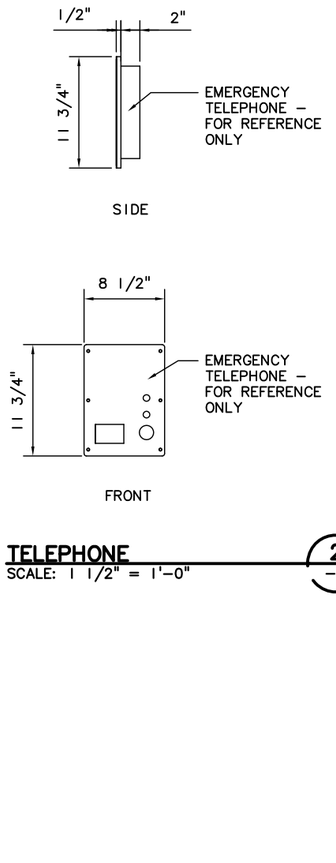
1. STAINLESS STEEL FINISH: AS SPECIFIED.
2. REF. PMLR EAST & WEST SEGMENT ARCHITECTURAL PLANS FOR LOCATIONS.
3. PHONE TO BE LOCATED ON THE PEDESTAL SIDE CLOSEST TO THE CENTER OF PLATFORM.
4. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST & WEST DRAWINGS.
5. DIGITAL ARTWORK FOR SIGN LAYOUT TO BE PROVIDED BY OWNER.
6. TELEPHONE PROVIDED BY OWNER.











TELEPHONE 2
SCALE: 1 1/2" = 1'-0"

EMERGENCY PHONE PEDESTAL ELEVATION 1
SCALE: 1 1/2" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

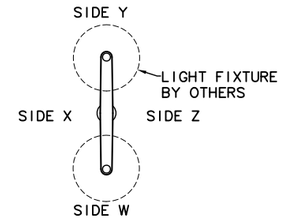
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

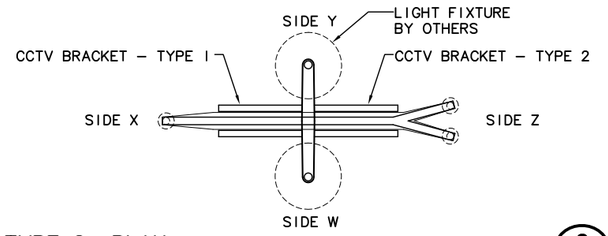
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 46
EMERGENCY PHONE PEDESTAL ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-130	RH100544JB	

bmartin
Mar 21, 2012 10:14pm
M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-130.dwg



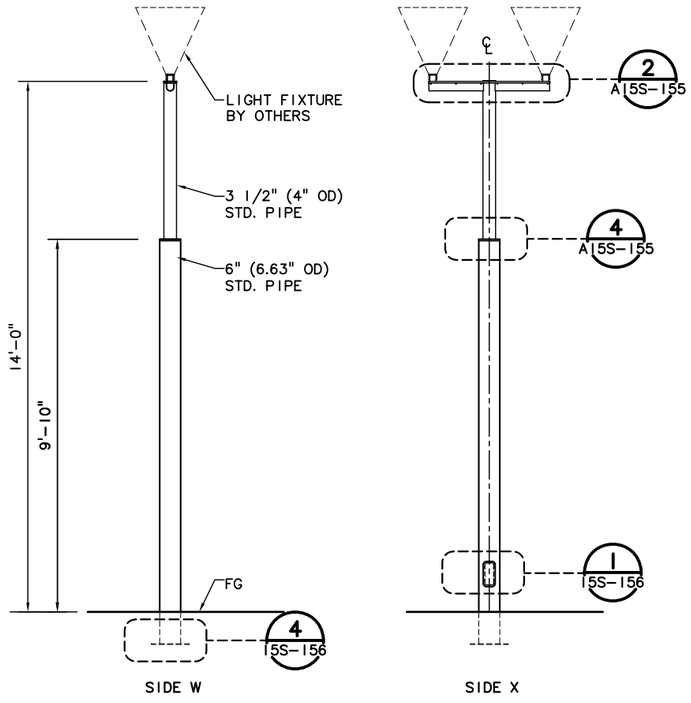
TYPE 1 PLAN — 1
SCALE: 1/2" = 1'-0"



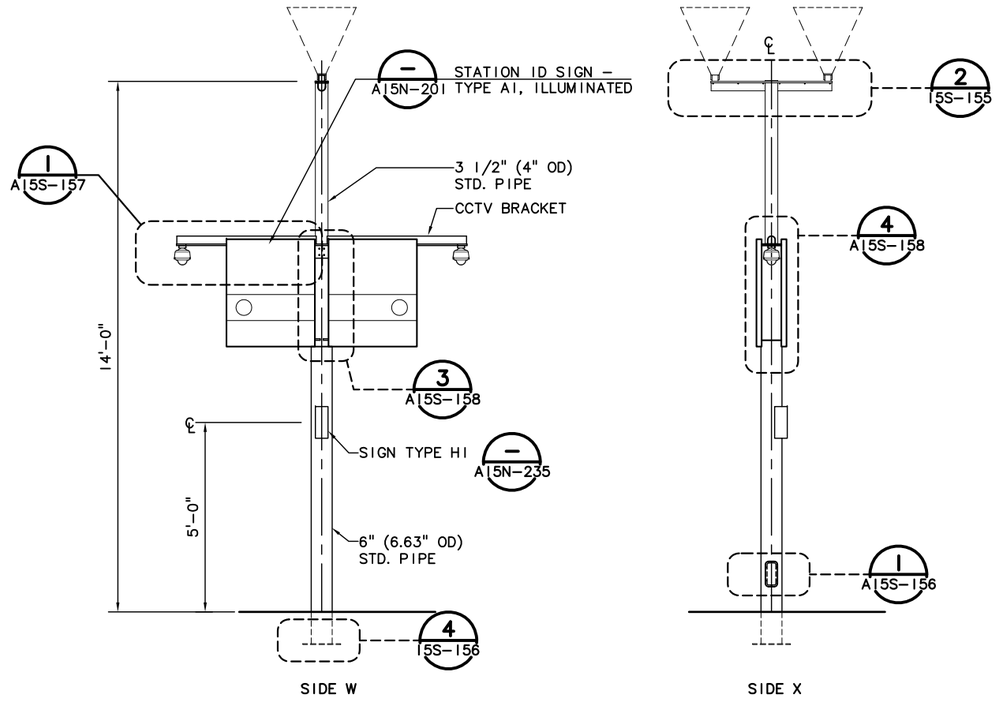
TYPE 2 PLAN — 2
SCALE: 1/2" = 1'-0"

NOTES:

1. SIDE "W" TO BE ORIENTED TO SOUTHBOUND END OF PLATFORM.
2. CCTV BRACKET TYPE AND POSITION VARIES. REF. A15S-153, A15S-154 LIGHT AND CCTV POLE SCHEDULE.
3. REF. A15S-157 FOR CCTV BRACKET TYPE 1 & 2.
4. SIGHT TYPE H1 NOT APPLIED TO ALL LIGHT POLES. REF. A15N-281 FOR LOCATIONS.
5. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. EAST & WEST SEGMENT DRAWING.
6. ELECTRICAL, LIGHT FIXTURE & CCTV CAMERAS BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.



TYPE 1 — 3
SCALE: 1/2" = 1'-0"



TYPE 2 — 4
SCALE: 1/2" = 1'-0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

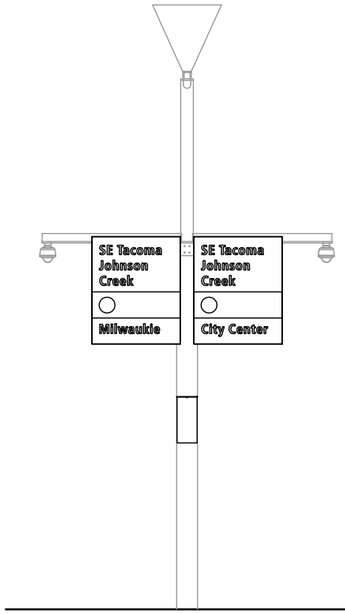
SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 47
LIGHT POLE – TYPE 1 & 2
PLAN & ELEVATION

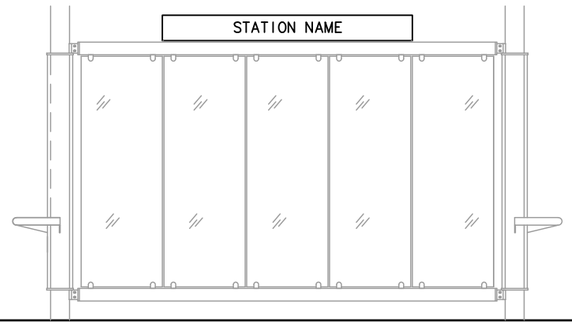
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-150	RH100186JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-150.dwg Mar 22, 2012 1:52pm bmartin

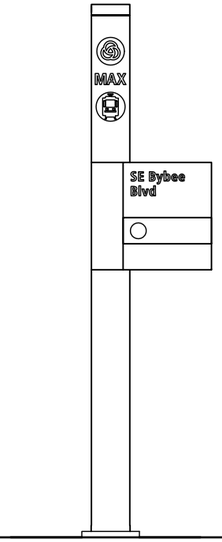
NOTES:
1. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E-006, A15W-003.



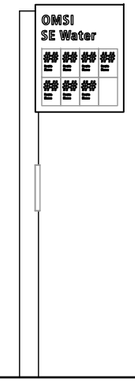
STATION ID SIGN – TYPE A1
LIGHT POLE MOUNTED
REF. A15N-210



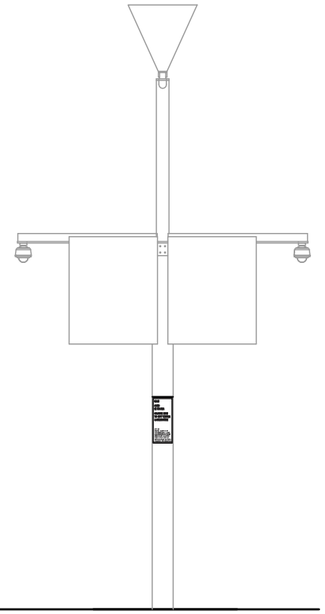
STATION ID SIGN – TYPE C1
WINDSCREEN MOUNTED
REF. A15N-230



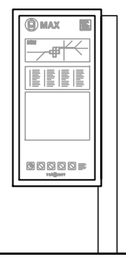
STATION ID PYLON SIGN – TYPE F1
REF. A15N-260



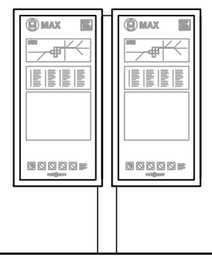
BUS STOP SIGN – TYPE G1
REF. A15N-270



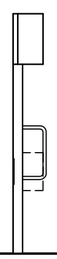
TACTILE SIGN – TYPE H1
REF. A15N-280



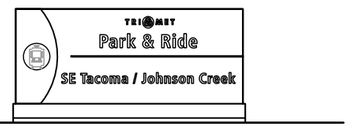
TRANSIT INFORMATION SIGN – TYPE B1
DOUBLE SIDED
REF. A15N-220



TRANSIT INFORMATION SIGN – TYPE B2
SINGLE SIDED
REF. A15N-220



FARE ZONE SIGN – TYPE D1
REF. A15N-216



PARK & RIDE SIGN – TYPE E1
REF. A15N-217

SIGN FAMILY

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

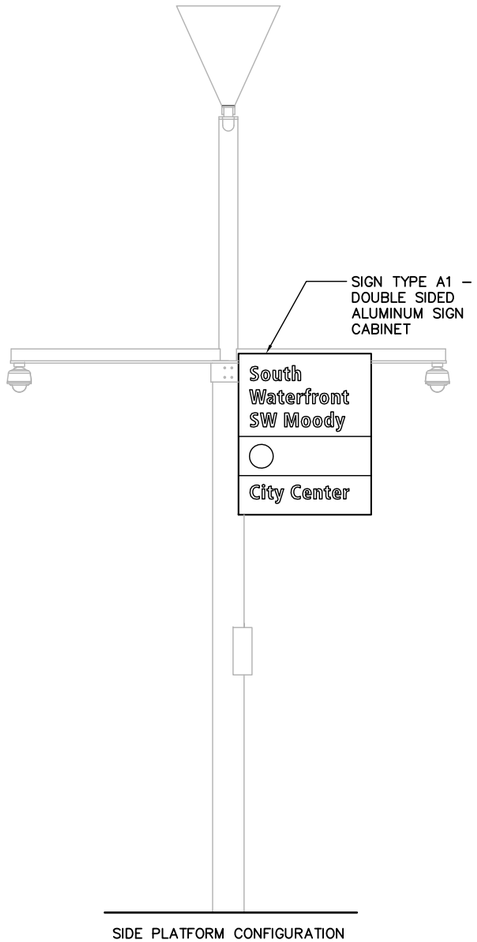
PORTLAND TO MILWAUKIE LRT
AMENITIES
SIGN FAMILY

Exhibit T 48

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-200	RH100544JB	

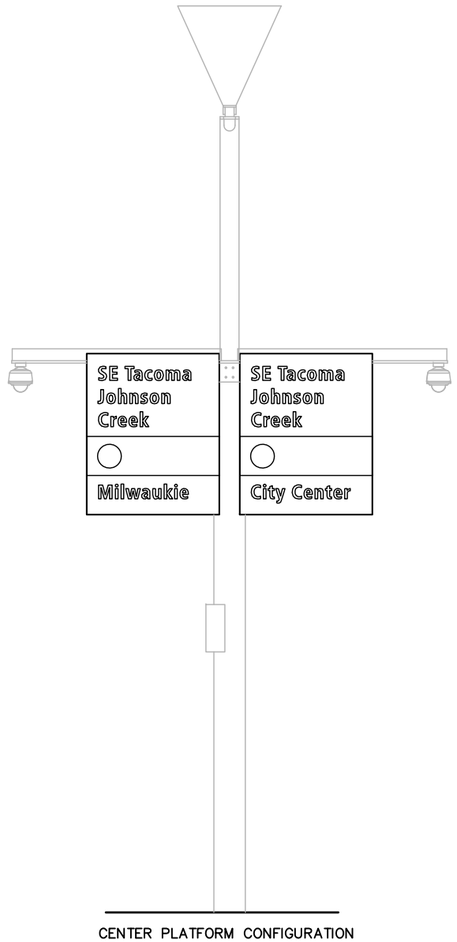
NOTES:

1. COORDINATE SIGN INSTALLATION FIT–UP WITH LIGHT POLE FABRICATION. REF. A15S–150.
2. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.
3. ELECTRICAL TO LIGHT FIXTURE BY OTHERS. REF. PMLR EAST & WEST DRAWINGS.



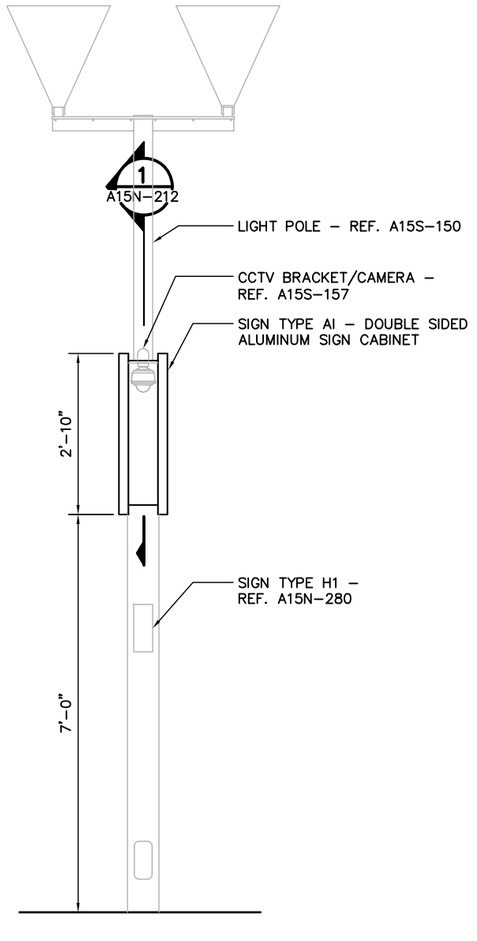
SIDE PLATFORM CONFIGURATION

TYPE A1 – SINGLE SIGN (1)
SCALE: 3/4" = 1'–0"

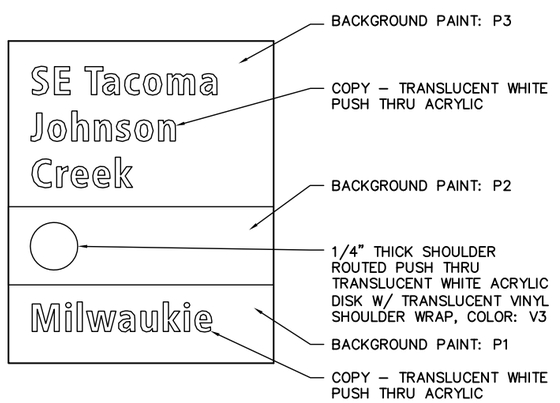


CENTER PLATFORM CONFIGURATION

TYPE A1 – DOUBLE SIGN (2)
SCALE: 3/4" = 1'–0"



TYPE A1 – END VIEW (3)
SCALE: 3/4" = 1'–0"



TYPE A1 – SIGN FACE DETAIL (4)
SCALE: 1 1/2" = 1'–0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
JFC DRAWN	01–27–12	DATE
DFS CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 49
STATION ID SIGN – TYPE A1
ELEVATION

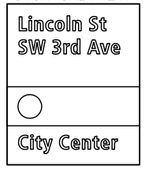
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N–210	RH100544JB	

M:\2_VC_PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-210.dwg
Mar 22, 2012 2:32pm
jcarlson

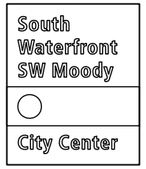
NOTES:

1. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.
2. LAYOUT THE SAME FOR BOTH SIDES OF CABINET.
3. REFERENCE A15S-153 AND A15S-154 POLE SCHEDULE FOR LOCATIONS.

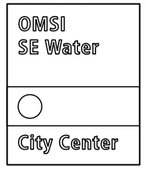
LIGHT POLE #: 1-1, 1-4, 1-5
SIGN CABINET: POLE SIDE Z



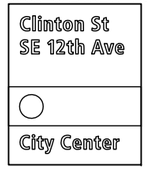
LIGHT POLE #: 2-2, 2-4, 2-5
SIGN CABINET: POLE SIDE Z



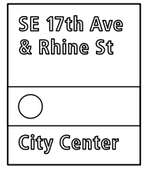
LIGHT POLE #: 3-2, 3-5, 3-6 SIGN
CABINET: POLE SIDE Z



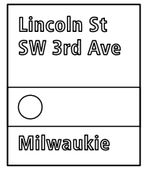
LIGHT POLE #: 4-3, 4-4, 4-6
SIGN CABINET: POLE SIDE Z



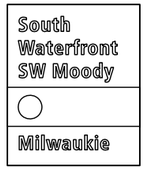
LIGHT POLE #: 5-2, 5-3, 5-5
SIGN CABINET: POLE SIDE Z



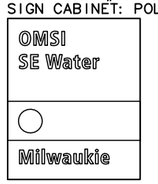
LIGHT POLE #: 1-1, 1-4, 1-5
SIGN CABINET: POLE SIDE X



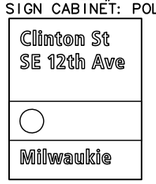
LIGHT POLE #: 2-6, 2-7, 2-9
SIGN CABINET: POLE SIDE X



LIGHT POLE # 3-7, 3-8, 3-11,
SIGN CABINET: POLE SIDE X

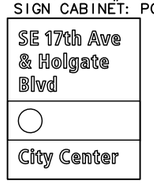


LIGHT POLE #: 4-3, 4-4, 4-6
SIGN CABINET: POLE SIDE X

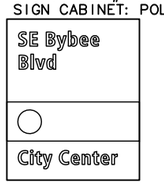


LIGHT POLE #: 5-2, 5-3, 5-5
SIGN CABINET: POLE SIDE X

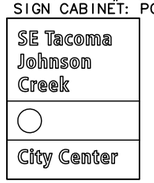
LIGHT POLE #: 6-2, 6-3, 6-5
SIGN CABINET: POLE SIDE Z



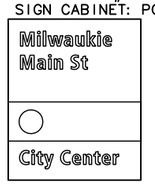
LIGHT POLE #: 7-1, 7-3, 7-4
SIGN CABINET: POLE SIDE Z



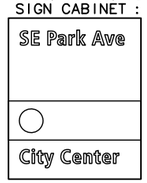
LIGHT POLE #: 8-3, 8-6, 8-7
SIGN CABINET: POLE SIDE Z



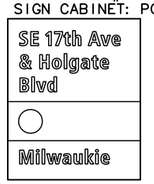
LIGHT POLE #: 9-3, 9-5, 9-6
SIGN CABINET: POLE SIDE Z



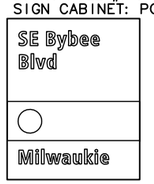
LIGHT POLE #: 10-2, 10-5, 10-6,
10-8, 10-10, 10-11
SIGN CABINET : POLE SIDE X & Z



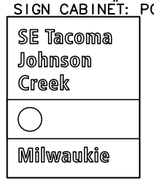
LIGHT POLE #: 6-2, 6-3, 6-5
SIGN CABINET: POLE SIDE X



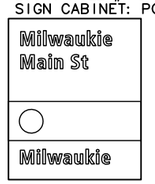
LIGHT POLE #: 7-1, 7-3, 7-4
SIGN CABINET: POLE SIDE X



LIGHT POLE #: 8-3, 8-6, 8-7
SIGN CABINET: POLE SIDE X



LIGHT POLE #: 9-3, 9-5, 9-6
SIGN CABINET: POLE SIDE X



TYPE A1 LAYOUTS

SCALE: 3/4" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED 01-27-12 DATE
JFC DRAWN 01-27-12 DATE
DFS CHECKED 03-19-12 DATE
KHF APPROVED 03-23-12 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

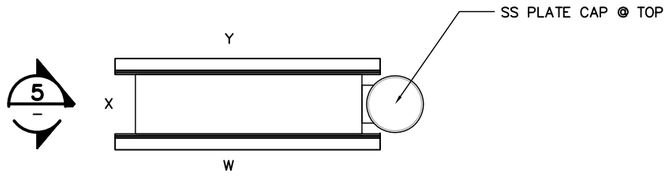
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

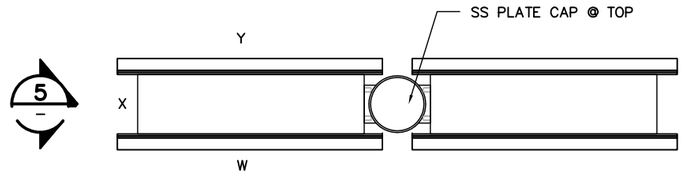
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 50
STATION ID SIGN - TYPE A1
LAYOUTS

SCALE: AS NOTED | DRAWING NO.: A15N-211 | CONTRACT NO.: RH100544JB | SHEET NO.:

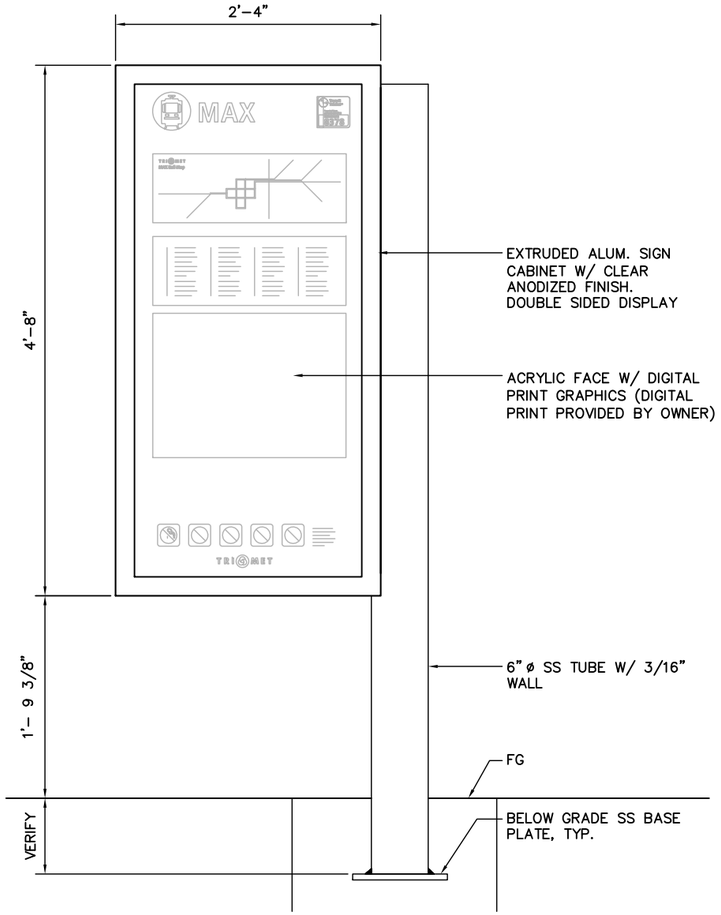
NOTES:
1. REF. PMLR EAST & WEST SEGMENT ARCHITECTURAL PLANS FOR LOCATIONS.
2. ABOVE GRADE BASE PLATE REQUIRED AT BYBEE STATION, REF. A15E–443.
3. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.
4. ELECTRICAL TO LIGHT FIXTURE BY OTHERS. REF. PMLR EAST & WEST SEGMENT ELECTRICAL DRAWINGS.



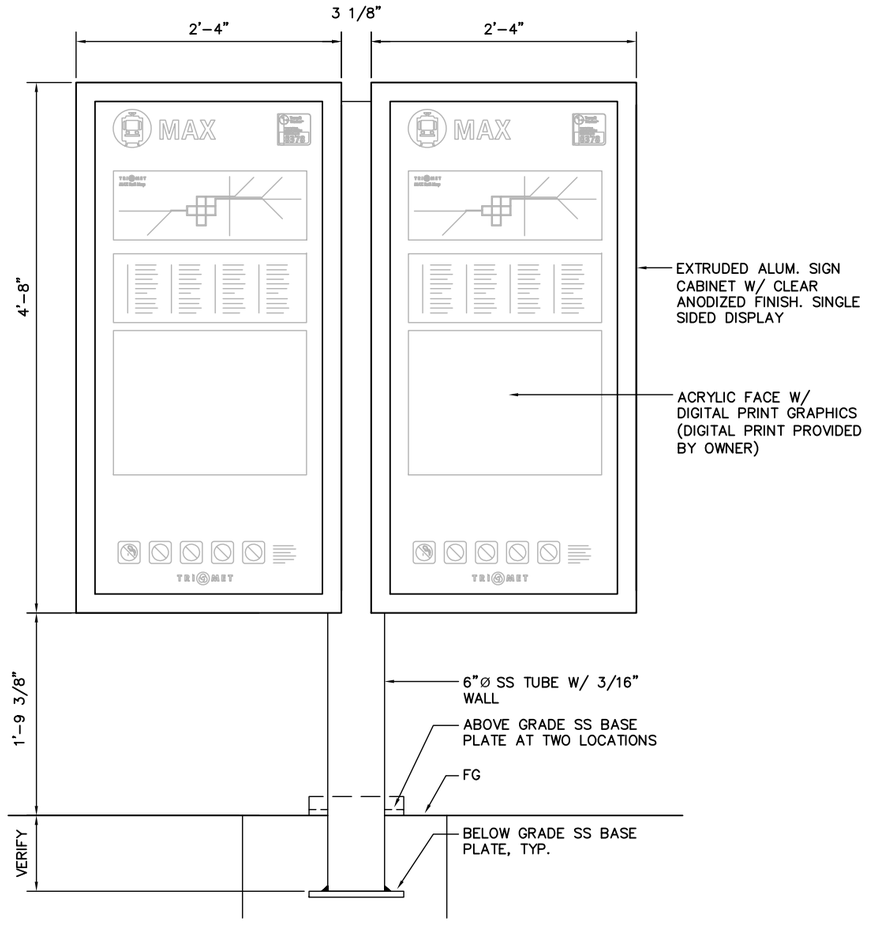
TYPE B1 – PLAN (1)
SCALE: 1 1/2" = 1'–0"



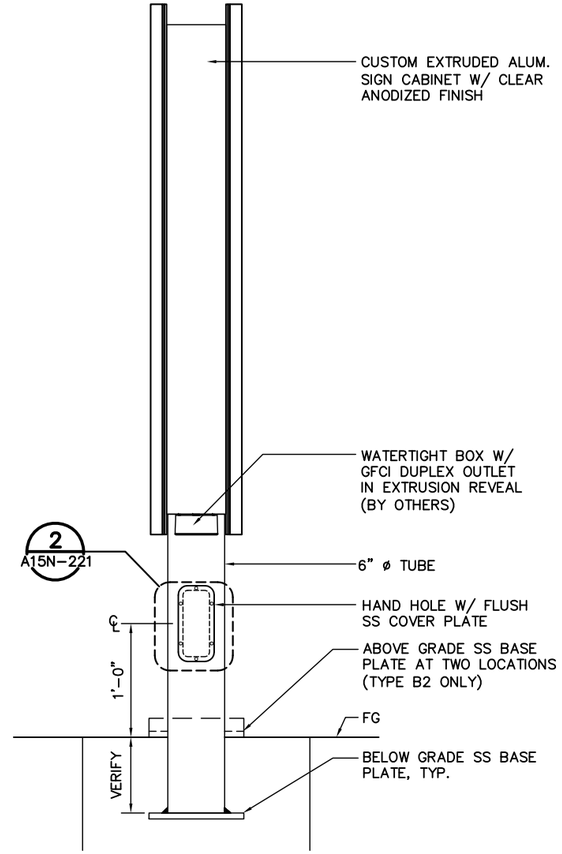
TYPE B2 – PLAN (2)
SCALE: 1 1/2" = 1'–0"



TYPE B1 – ELEVATION W (3)
SCALE: 1 1/2" = 1'–0"



TYPE B2 – ELEVATION W (4)
SCALE: 1 1/2" = 1'–0"



TYPE B1 & B2 – ELEVATION X (5)
SCALE: 1 1/2" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
JFC DRAWN	01–27–12	DATE
DFS CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

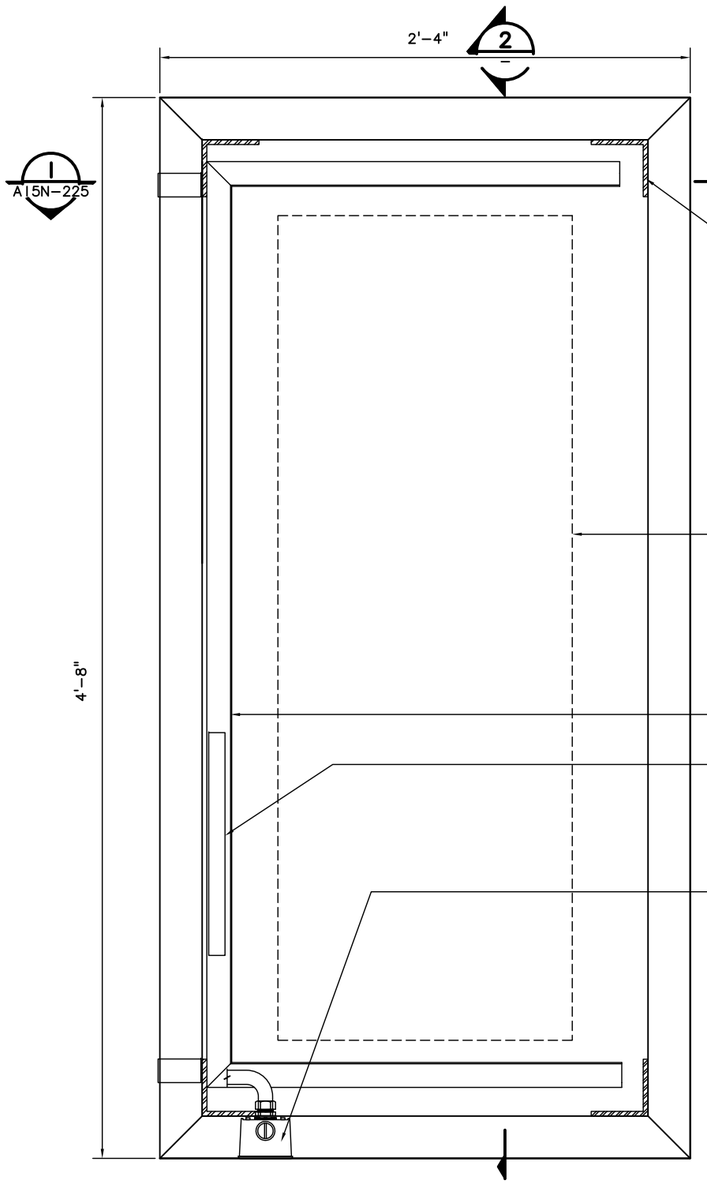
SUBMITTED:	DATE:	APPROVED:	DATE:

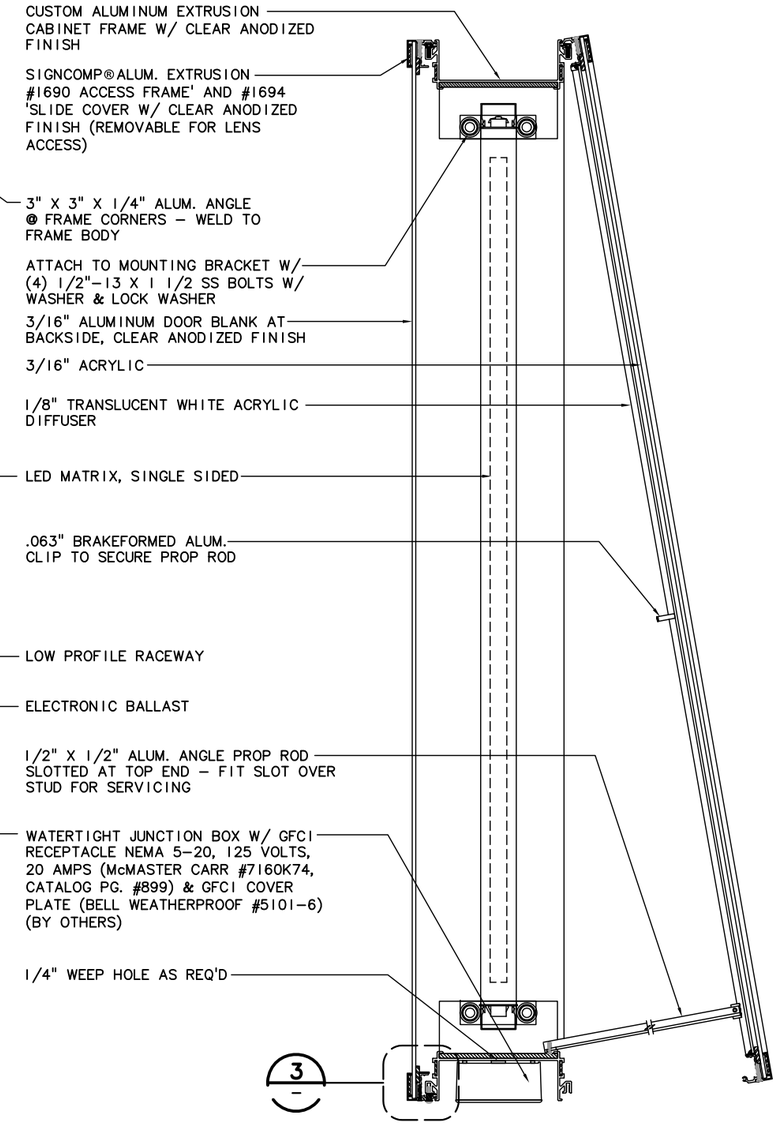
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 51
TRANSIT INFORMATION SIGN – TYPE B1, B2
PLAN & ELEVATION

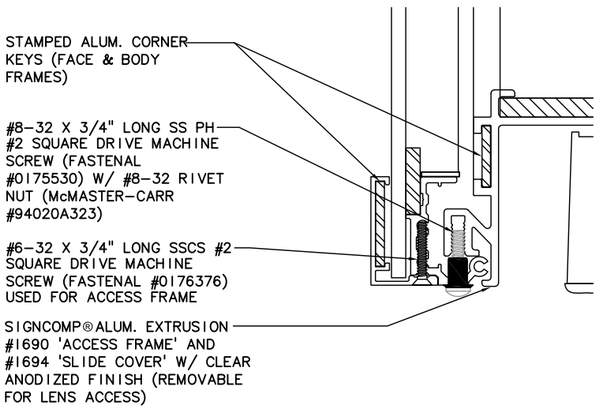
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N–220	RH100544JB	

NOTES:

1. DOOR HINGE ALLOWS FOR 45° MAX. OPEN ANGLE
2. ALUM. ANGLE PROP ROD – ONE PER CABINET FACE, ON COLUMN SIDE







TYPE B2 – SINGLE SIDED CABINET DETAIL (1)
SCALE: 3" = 1'-0"

TYPE B2 – SECTION (2)
SCALE: 3" = 1'-0"

TYPE B2 – ACCESS FRAME DETAIL (3)
SCALE: 1'-0" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

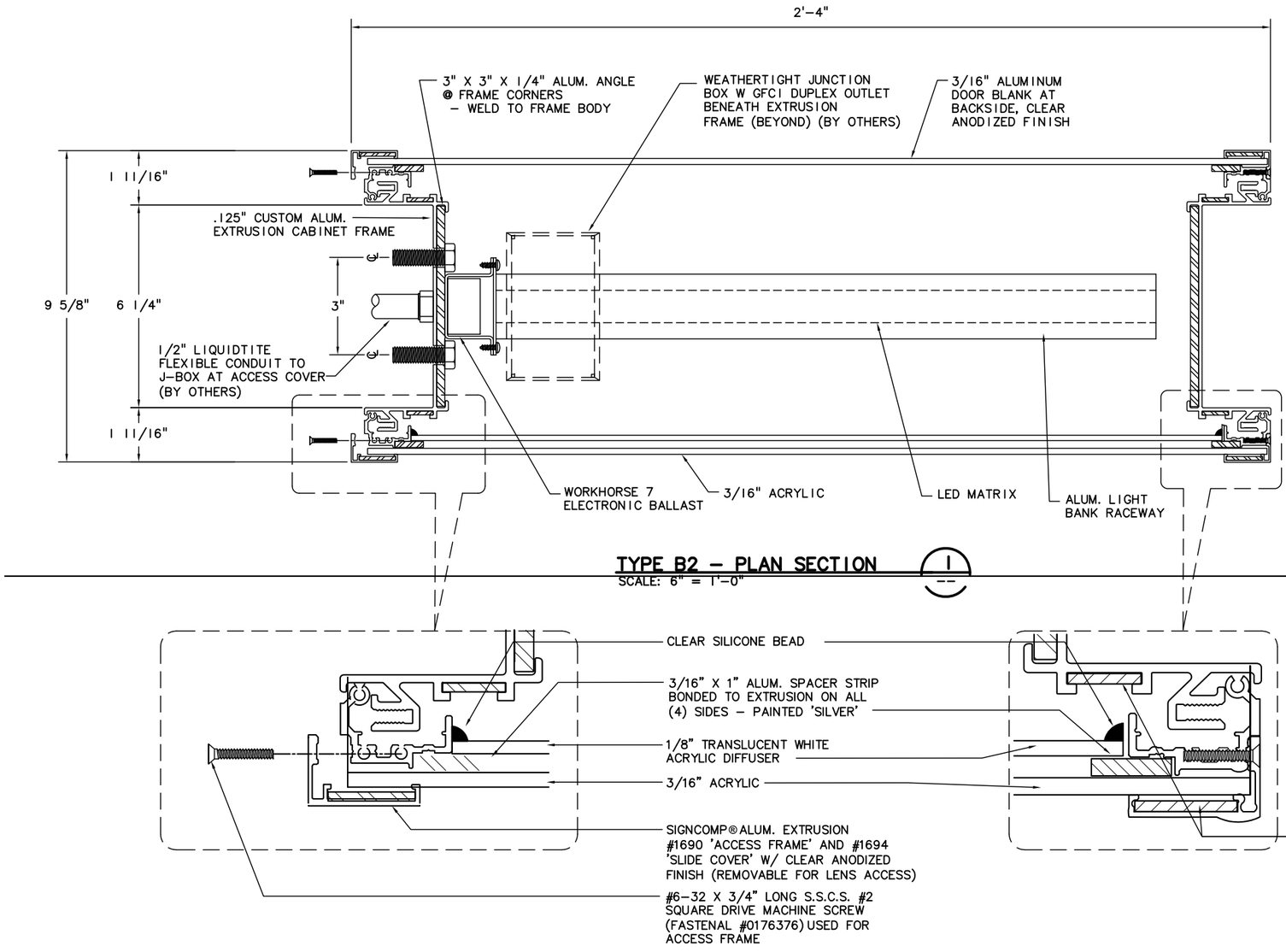
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 52
TRANSIT INFORMATION SIGN – TYPE B2
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-224	RH100544JB	

M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-224.dwg Mar 21, 2012 9:42pm bmartin

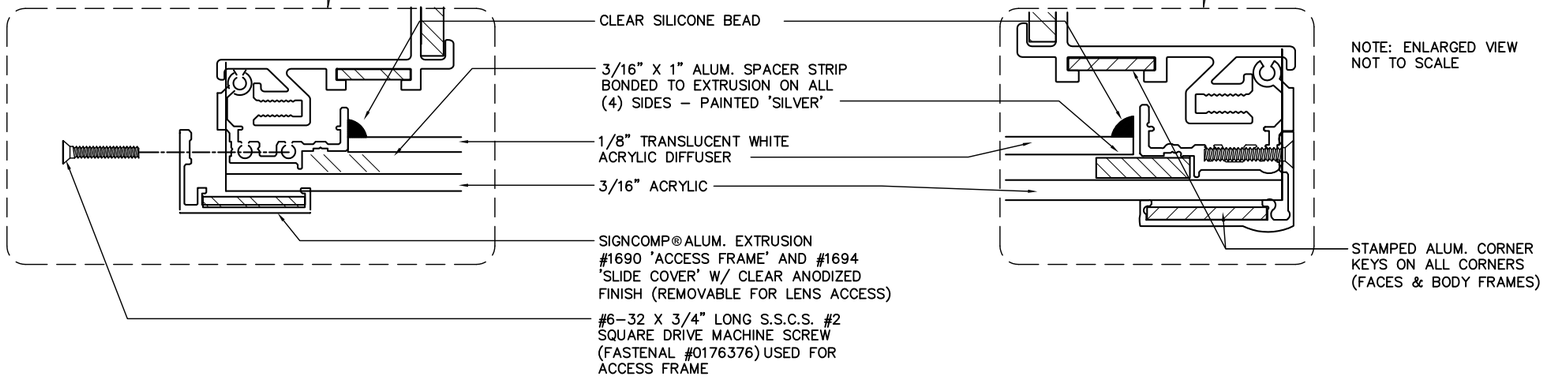
NOTES:

1. FACE FRAMES ARE CUT 1/16" LARGER THAN CABINETS FOR PROPER FIT.



TYPE B2 – PLAN SECTION (1)

SCALE: 6" = 1'-0"



NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR (DESIGNED)	01-27-12	DATE
JFC (DRAWN)	01-27-12	DATE
DFS (CHECKED)	03-19-12	DATE
KHF (APPROVED)	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT

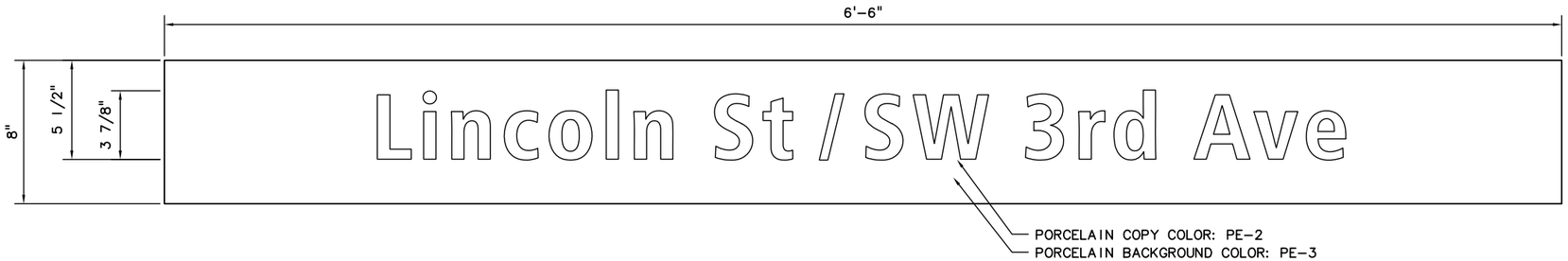
AMENITIES

Exhibit T 53

TRANSIT INFORMATION SIGN – TYPE B2 DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-225	RH100544JB	

NOTES:
1. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.



TYPE C1 – TYPICAL SIGN LAYOUT
SCALE: 3" = 1'-0"

1

Lincoln St / SW 3rd Ave

South Waterfront / SW Moody

OMSI / SE Water

Clinton St / SE 12th Ave

SE 17th Ave & Rhine St

SE 17th Ave & Holgate Blvd

SE Bybee Blvd

SE Tacoma / Johnson Creek

Milwaukie / Main St

SE Park Ave

TYPE C1 – SIGN LAYOUTS
SCALE: 1" = 1'-0"

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayor/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

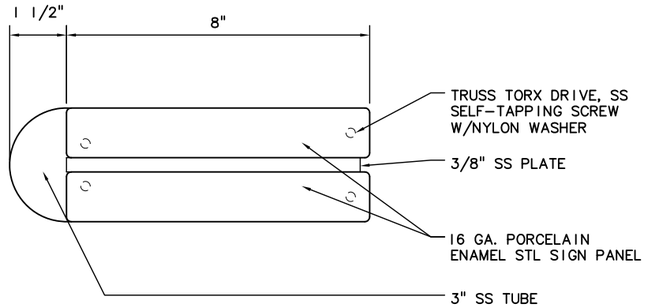
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 54
STATION ID SIGN – TYPE C1
LAYOUTS

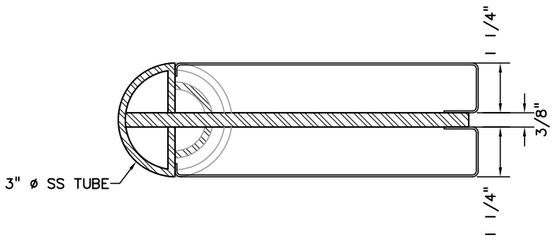
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-231	RH100544JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100K\DWGS\A15N-231.dwg
Mar 21, 2012 9:47pm
bmartin

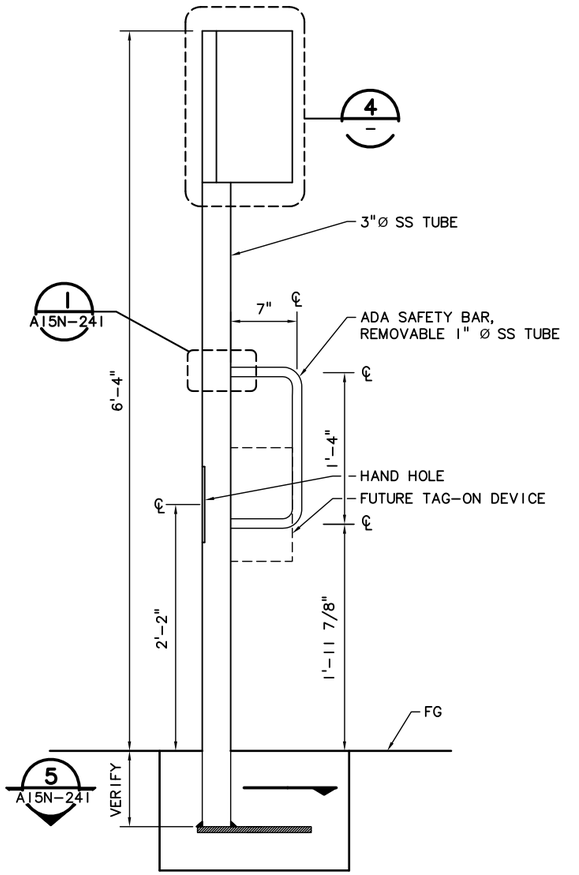
NOTES:
1. DIGITAL ARTWORK FOR SIGN LAYOUT PROVIDED BY OWNER.
2. REFERENCE PMLR EAST & WEST ARCHITECTURAL PLANS FOR LOCATIONS.



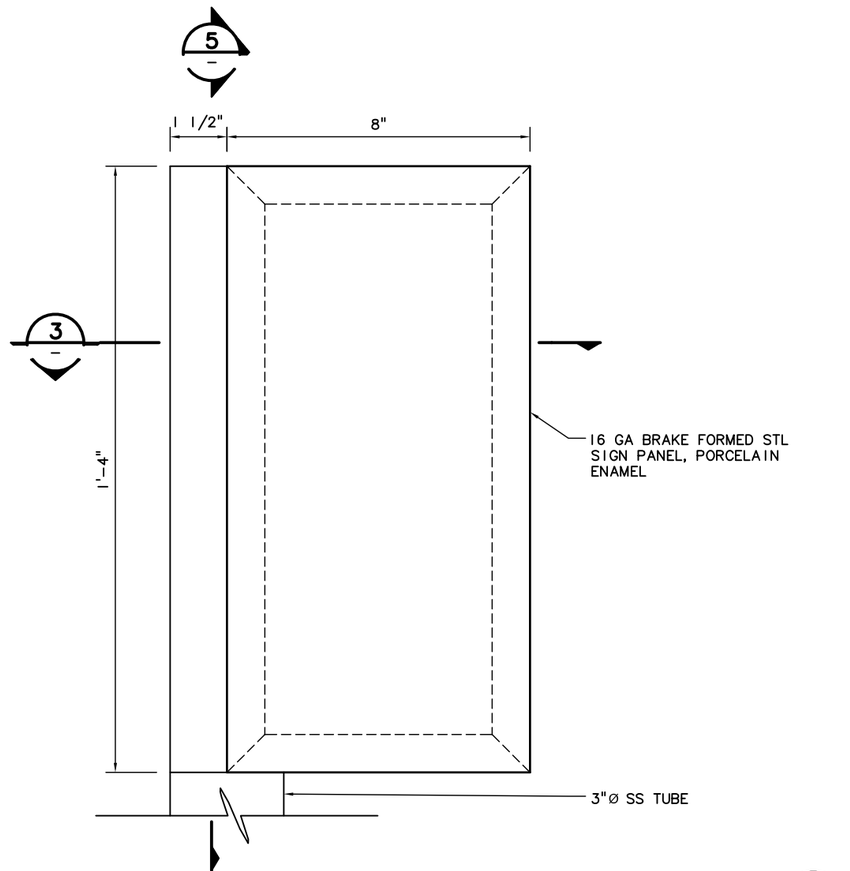
TYPE DI – PLAN
SCALE: 6" = 1'-0"
2



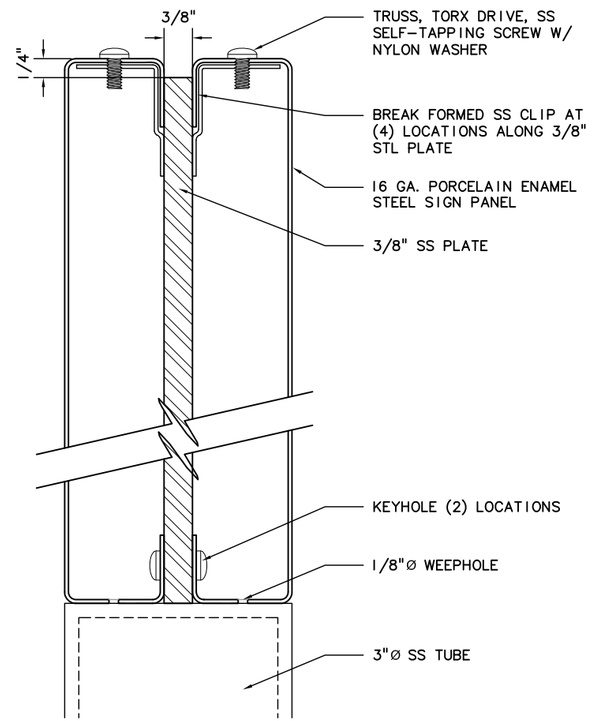
TYPE DI – PLAN SECTION
SCALE: 6" = 1'-0"
3



TYPE DI – SIGN POST – ELEVATION
SCALE: 1 1/2" = 1'-0"
1



TYPE DI – SIGN DETAIL
SCALE: 6" = 1'-0"
4



TYPE DI – SECTION
SCALE: 1'-0" = 1'-0"
5

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

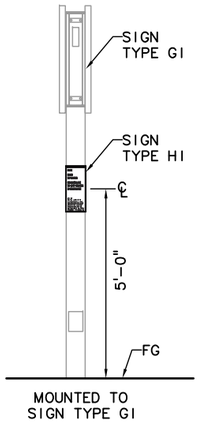
Mayer/Reed

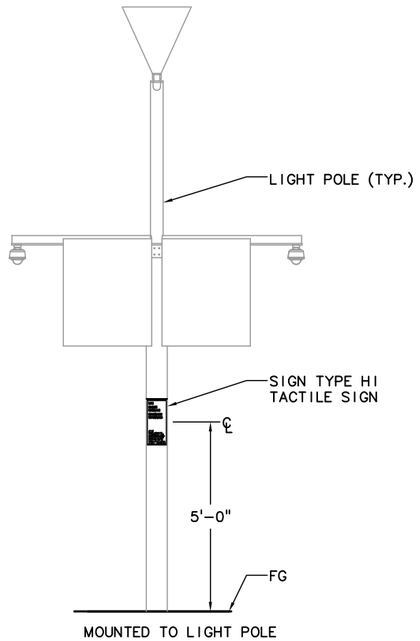
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

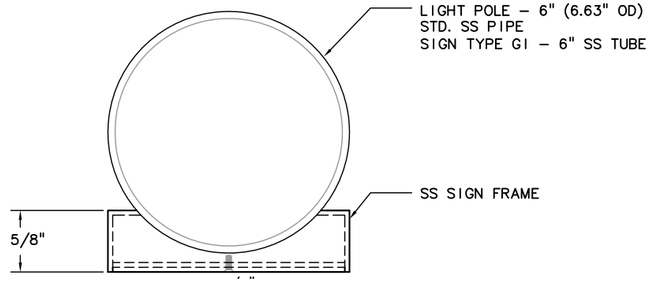
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 55
FARE ZONE SIGN – TYPE DI
PLAN, ELEVATION & DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-240	RH100544JB	

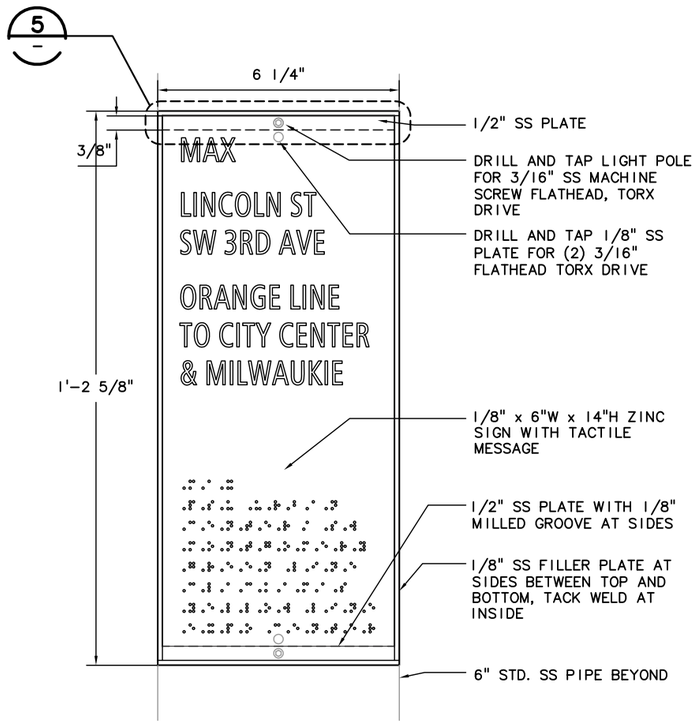




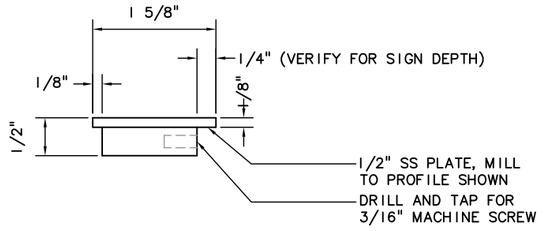
TYPE HI – ELEVATION
SCALE: 1/2" = 1'-0"



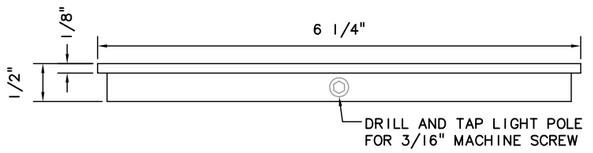
TYPE HI – PLAN
SCALE: 6" = 1'-0"



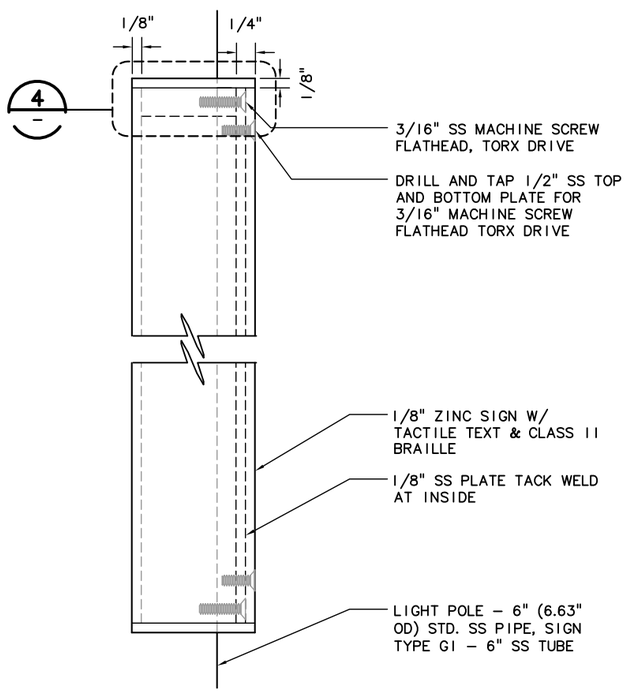
TYPE HI – FRONT ELEVATION
SCALE: 6" = 1'-0"



TOP/BOTTOM FRAME – DETAIL SIDE VIEW
SCALE: 1'-0" = 1'-0"



TOP/BOTTOM FRAME – DETAIL FRONT VIEW
SCALE: 1'-0" = 1'-0"



TYPE HI – SIDE ELEVATION
SCALE: 1'-0" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

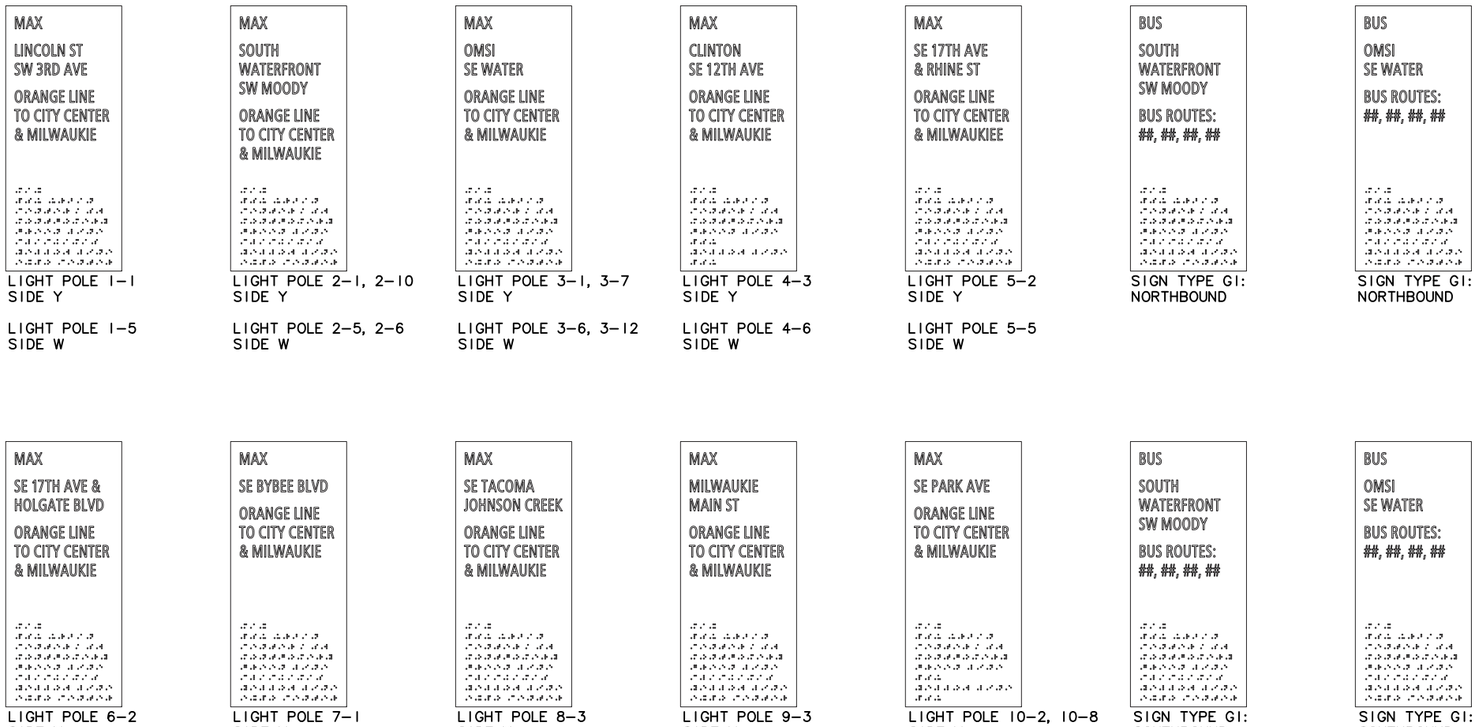
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 56
TACTILE SIGN – TYPE HI
PLAN, ELEVATION & DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-280	RH100544JB	

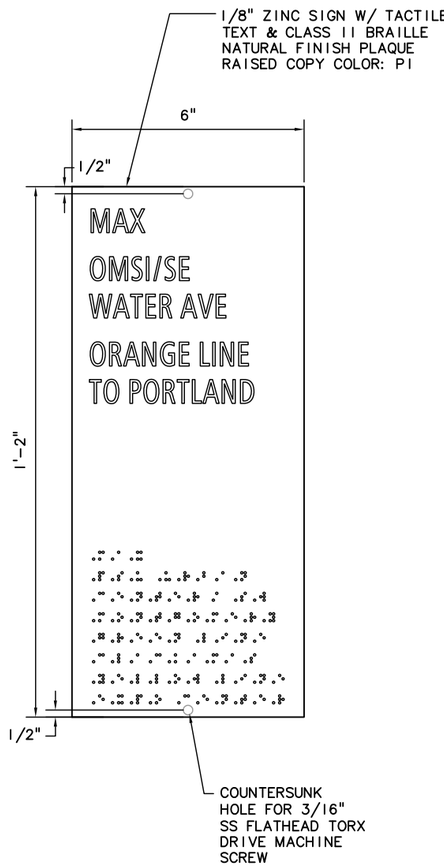
NOTES:

1. DIGITAL ARTWORK FOR SIGN LAYOUT PROVIDED BY OWNER.
2. FABRICATOR IS RESPONSIBLE FOR BRAILLE TEXT.
3. REFERENCE A15S-153 AND A15S-154 POLE SCHEDULE FOR LIGHT POLE LOCATIONS.
4. REFERENCE:
   A15E-400
   A15E-401
   A15W-227
   A15W-228
   PLAN VIEW FOR SIGN TYPE G1 LOCATIONS



TYPE H1 – LAYOUTS
SCALE: 3" = 1'-0"

1



TYPE H1 – ENLARGED LAYOUT
SCALE: 6" = 1'-0"

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

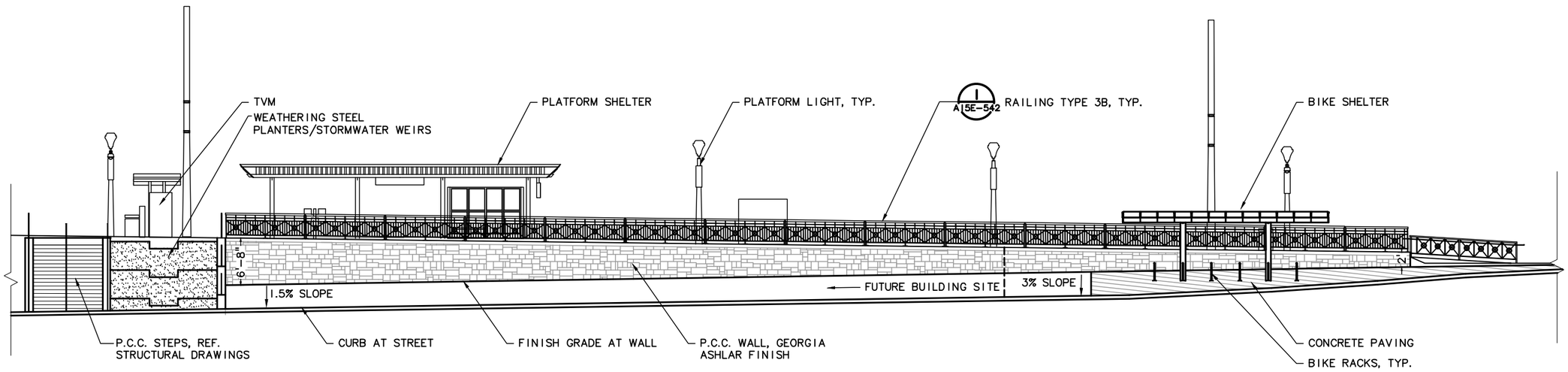
TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 57
TACTILE SIGN – TYPE H1
LAYOUTS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-281	RH100544JB	

M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-281.dwg
Mar 21, 2012 10:00pm
bmartin



WALL – EAST ELEVATION

SCALE: 1/8" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	JMS	CMR		ISSUED FOR CONSTRUCTION

RAH	DESIGNED	09-12-11 DATE
JC	DRAWN	06-01-11 DATE
JMS	CHECKED	04-17-12 DATE
	APPROVED	5-14-12 DATE

PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

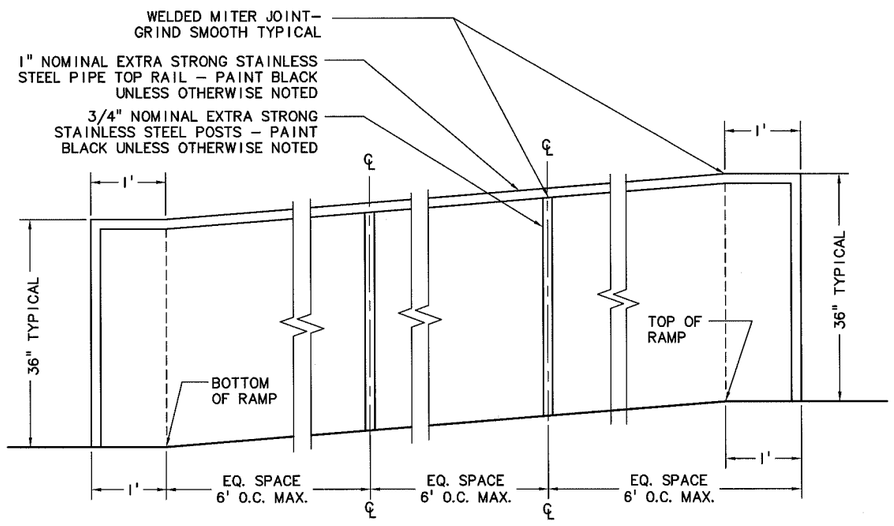
TRIMET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

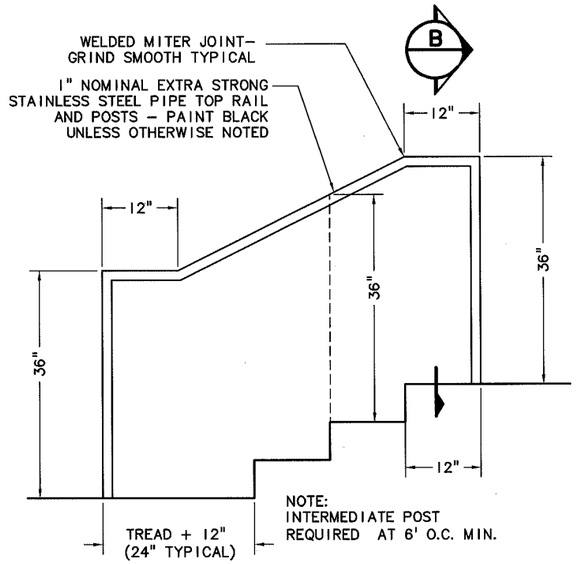
PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ELEVATION – MILWAUKIE PLATFORM EAST ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS SHOWN	WALL ELEV	RH100544JB	

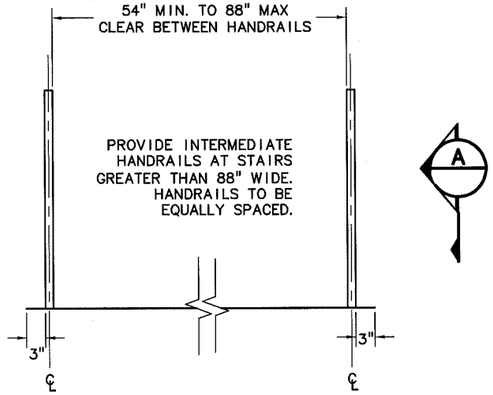


RAILING – TYPE 12A
HANDRAIL AT RAMP 1

SCALE: 1"=1'–0"



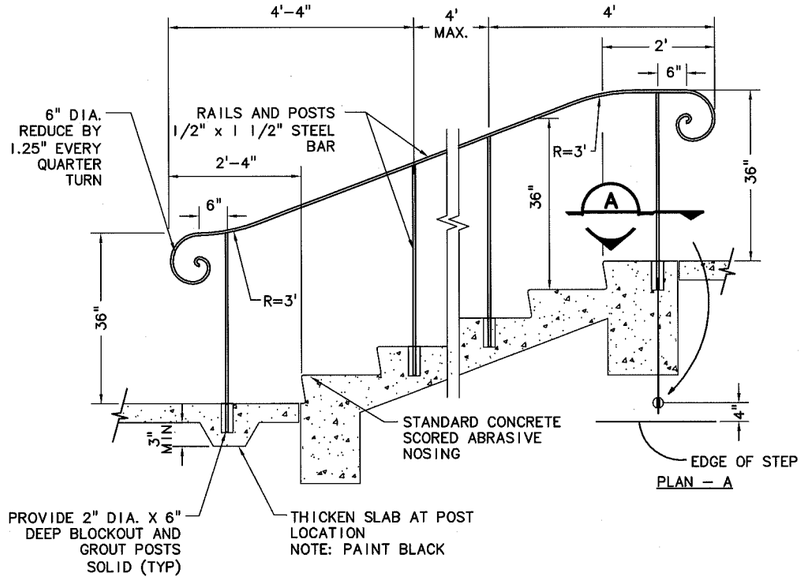
A ELEVATION



B SECTION

RAILING – TYPE 12A
P.C.C. STEPS WITH HANDRAIL 2

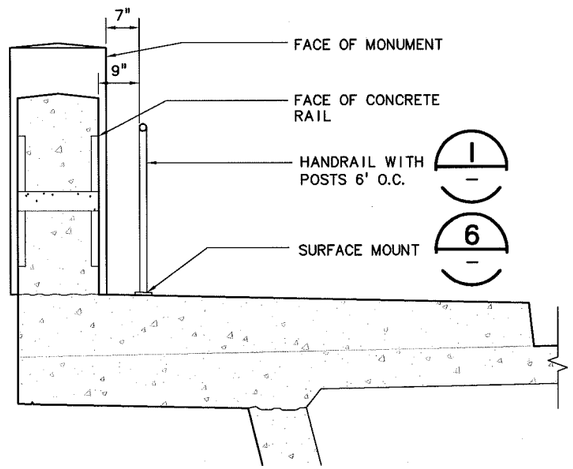
SCALE: 1"=1'–0"



PLAN – A

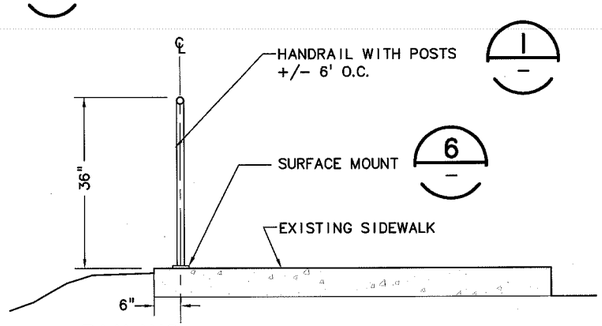
RAILING – CORTI PROPERTY 3

SCALE: 3/4"= 1'–0"



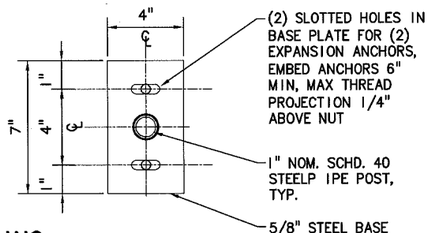
RAILING
HANDRAIL AT BYBEE DECK 4

SCALE: 3/4" = 1'–0"



RAILING
HANDRAIL AT EXISTING SIDEWALK 5

SCALE: 3/4" = 1'–0"



RAILING
SURFACE MOUNT AT PCC SIDEWALK 6

SCALE: 3" = 1'–0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	RAH	CMR		ISSUED FOR CONSTRUCTION

CHECK PRINT
4-23-12

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
RAH CHECKED	04-17-12	DATE
APPROVED	5-14-12	DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE: 5–14–12	APPROVED:	DATE: 5–14–12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
DETAILS – RAILINGS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-549	RH100544JB	

R:\15-CD DUMP\15E-EASTWAR ROOM\05- Architectural\A15E-549.dwg, 4/23/2012 1:25:41 PM, mcbridej

Alligood, Li

From: Larsen, Tom
Sent: Wednesday, May 02, 2012 11:41 AM
To: Alligood, Li
Subject: Light Rail Station; CSU-12-03 etc.

Li,
I have no specific comment on this application. Any construction on the site must comply with the applicable Oregon Specialty Codes as adopted by the City of Milwaukie.
Thanks,

Tom Larsen, CBO
Building Official, City of Milwaukie
Phone: (503) 786-7611
Fax: (503) 786-7612

MEMORANDUM

TO: Community Development Department

THROUGH: Gary Parkin, Director of Engineering

FROM: Zachary Weigel, Civil Engineer

RE: Light Rail Station
CSU-12-03, DR-12-04, VR12-02

DATE: May 11, 2012

TriMet proposes to build a light rail station in the Downtown Office Zone.

Recommended Conditions of Approval

None

Advisory Notes

The following are advisory notes for the applicant. The advisory notes are a list of requirements that may apply to the proposed development at the time of building permit. The advisory notes are for informational purposes only.

Storm Water Management

Submit a storm water management plan prepared by a qualified professional engineer with required development/building permits as part of the proposed development. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

- The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.
- The storm water management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.
- Development/building permits will not be issued for construction until the storm water management plan has been approved by the City of Milwaukie.

MILWAUKIE
Dogwood City of the West

Memorandum

To: **Design and Landmarks Committee**

From: **Kenny Asher, Community Development and Public Works Director, PMLR Project Manager**
Wendy Hemmen, P.E., Light Rail Design Coordinator

CC: **Li Alligood, Assistant Planner**

Date: **May 14, 2012**

Re: **Comments on PMLR Station Design Review Application (DR-12-04)**

The purpose of this memo is to share with the DLC staff comments on the proposed design, having contributed to the design process over the past year and a half. For the purpose of this memo, the term "station" is meant to describe the platforms and trackway between Adams Street and Lake Road, and associated ramps and structures including the ramp structures above Lake Road.

Milwaukie staff has met frequently with TriMet's design team since the Preliminary Engineering phase of the project came to an end in 2010. We offered specific suggestions and feedback to help the design team work through its process; during public meetings over the last six months, the DLC provided design guidance and significantly shaped the project that TriMet has submitted for Design Review.

As we participated in the design and facilitated the public discussion over the past year, City staff encouraged the design team to design a light rail station that would reflect the Downtown Design Guidelines and address City Council's recommendations on the Conceptual Design Report. With that background, we offer the following observations and comments about the progression and status of the station design for the DLC's consideration:

- *The City asked TriMet to coordinate station design with Milwaukie's South Downtown development plans.*

  The station design reflects the adopted South Downtown Concept Plan's "transit connection" concept in the following ways:

  - The principal connection to the station is from 21st Ave and Adams St via a crescent-shaped sidewalk that guides pedestrians and bicycles across three rail tracks to the station.

  - The secondary connection to the station a direct pedestrian connection between the south end of the station and Lake Rd via a staircase.

- *The City asked TriMet to design the station in anticipation of a joint development project that will occur on the "triangle site" adjacent to the northbound platform.*

  The design team has designed the platform and necessary components (access, fixtures, and public art) to allow development of the remainder of the site. The proposed platform and plaza design supports the active uses desired on the site in the future. The submitted materials provide information about the design and scale of the retaining walls on site, which will be the primary built feature until such a time as the station building is developed. Staff looks forward to seeing additional information about the detailing and scale of the walls viewed from 21st Ave.

- *The City asked TriMet to consult with the DLC on the design of the station to ensure that the design supports future development on adjacent parcels and enhances pedestrian connections in the area.*

  The design team has consulted with the DLC on numerous occasions to refine the design of the station, including connection points between the platform and the street network; and understanding future platform connections with the future building; and the relationship between each.

- *The City asked TriMet to develop the station design to ensure that platform infrastructure and amenities are located outside of the 21st Ave public right-of-way.*

  The proposed platform infrastructure and amenities are contained entirely on site. The station was pulled to the south from 21st Ave right of way. The railing is minimized to allow better pedestrian circulation on the westerly public sidewalk of 21st Ave.

- *The City asked TriMet to coordinate with City staff to design transit shelters and furnishings that are distinctive and complement the character of downtown Milwaukie.*

  - The design team has proposed various options for distinctive shelters and furnishings including: shelter design; OCS poles; railings; platform paving treatments; retaining walls; and site landscaping during community open houses and in multiple meetings with the DLC.

  - With DLC input, the design team has proposed a sloped, glass-roofed shelter with integrated column art that reflects the station's adjacency and connection to nature. The columns and structural steel roof of the shelter will be painted "Milwaukie black" to reflect Milwaukie's downtown standards.

  - The proposal includes distinctive platform elements including: black rounded OCS poles; Milwaukie-specific black railings, trash cans, bench bases, and OCS poles; rusticated ashlar stone formliner retaining walls and safety walls; direct pedestrian access between the south end of the platform and Lake Rd; Milwaukie standard street lighting at the southern pedestrian access; and artwork that emphasizes the pedestrian environment and Milwaukie history.

- *The City asked TriMet to coordinate with City staff to improve the design of platform access; to place an emphasis on designing the access at the north end of each platform to be safe, universally accessible, and welcoming; and to minimize the construction of large retaining walls or ramps at the south end.*

  The access at the north end of the platform is universally accessible; public art and black ornamental railings at the access point are welcoming. Access is provided between 21st Ave and Adams St to the north via a crescent shaped sidewalk and black ornamental railings that guide passengers across three tracks to the station platform. There is a bench located along the from the Adams Street access, which leads to the Main Street plaza area, south downtown, City parks, and the Post Office. The access at the south end is by a straight flight of stairs. The visual mass of the retaining wall at Lake Rd is reduced through the use of human-scale texture and landscaping at the base of the wall and ivy plantings designed to climb the wall. The water quality facility and art work are integrated into the retaining walls.

- *The City asked TriMet to explore options for providing appropriate ADA access to the platforms and consider alternatives to TriMet standards.*

  The TriMet design team has worked with City staff and the Citizens for Accessible Transportation Committee to provide universally accessible access to the platforms from the north side; an alternative access has been provided at the south due to the fact that the grade change at Lake Rd required ramped access that resulted in a longer path of travel for passengers than using the primary access at the north. Elevator access providing an additional ADA route to the station may be obtained with the future building development.

- *The City asked TriMet to carefully design the pedestrian route from the platform to sidewalks on 21st Avenue and Lake Road to be safe, and to use downtown-appropriate streetscape elements, such as landscaping and decorative bollards, to guide pedestrians.*

  The northern pedestrian route from the platform to Adams St and 21st Ave is a crescent-shaped sidewalk on each side of 21st Avenue, as adopted by the South Downtown Concept Plan. It is important for the 21st Avenue sidewalk on both sides to look and feel like part of the City standard sidewalks built with the project, yet retain safety elements to protect pedestrians around the trains. Pedestrians are guided to and from the platform by a combination of ornamental black railings and gates, landscaping, Milwaukie standard bollards, and textured paving. Pedestrians are guided to Lake Rd and 21st Ave via the by black ornamental railings, Milwaukie standard decorative street lights, stormwater landscaping, and integrated public art.

- *The City asked that the station be designed with pedestrian connections at both platform ends to facilitate easy and clear access between the platform and the City's future plaza and Dogwood Park at the south end of Main Street.*

  The pedestrian connection at the north end is at-grade and provides a universally accessible entrance to the platform. Principal connection between the light rail station and the future Main Street plaza will be along Adams St. The pedestrian stair access at the south end of the platform provides an important connection between the station, Lake Rd, Dogwood Park, the future pedestrian bridge across Kellogg Lake, and the future Main Street plaza.

- *The City asked TriMet to integrate station lighting to provide a safe nighttime environment on the platform and under the bridge over Lake Road, such that lighting becomes a defining feature of the station.*

  The design team has submitted an ambient light study of new street lights in the vicinity of the station, and a photometric study of the proposed station and jump span lighting. The photometric study has demonstrated that the proposal will provide a safe nighttime environment on the platform and under the Kellogg Bridge jump span. The platform lighting includes a combination of City of Milwaukie standard fixtures (at the south stair access) and TriMet standard fixtures (on the center platform). The jump span lighting is elegant and simple and will become a defining feature of the Lake Rd access to the future Main St plaza. Lake Rd, 21st Avenue, and Adams Street will have City standard lights.

- *The City asked that the space created under the Kellogg Bridge jump span over Lake Road be well lit and comfortable. This will be an important passageway from the platforms and Lake Road to the plaza.*

  The design team has proposed an elegant and minimalist lighting plan for the Lake Rd jump span. The proposed lighting plan creates a well-lit, comfortable, and visually interesting passage from Lake Rd and 21st Ave to the future Main St plaza. The sidewalks under the bridge are wide to provide adequate pedestrian circulation, and provide as open a feeling as possible with the structure overhead. The structure is also designed to allow daylight through the center to Lake Rd below.

- *The City asked that TriMet explore creative incorporation of art along the alignment and at stations.*

  The station art is located in three areas of the station, and each piece of art work reflects the purpose and character of those areas. The design has been enthusiastically received by the DLC and the community. The art is integrated into the station design and will delight station users.

- *The City asked that TriMet make extensive use of plantings/vegetation to soften the visual impact of the station and related structures.*

  Several landscaped areas are proposed as part of the station design. The pedestrian access from Adams St and 21st Ave includes landscaping to guide pedestrians toward the platform. Landscaping is proposed to the west of the tracks to provide visual enhancement at the points where the track meets the public realm at the north and south of the platform. The pedestrian access at the south end of the platform is enhanced and softened by terraced stormwater facilities along the stairs and along the base of the abutment wall, as well as ivy plants designed to cover the wall in the future. Finally, the future second platform will be planted with landscaping until funding is available for its construction. Landscaping is being provided on the west side of the freight tracks on both Adams and Lake Road frontages, to enhance the look and feel of the station area and tie the west side to the east side of the light rail structure.

Materials & Exhibits for Land Use File CSU-12-03
(CSU-12-03, DR-12-04, VR-12-05)
Portland Milwaukie Light Rail Station

The following documents are part of the official record for this application:

1. Application
   - A. Milwaukie pre-application conference report, November 17, 2011 (PA #11-012)
   - B. Submittal forms date stamped March 27, 2012 (land use application forms, property owner authorization, submittal requirements form, fee receipt)
   - C. Responses to code standards and criteria (initial submission date stamped March 27, 2012; final submission date stamped April 26, 2012)
   - D. Memo from Jeff Joslin, KLK Consulting, to Li Alligood, City of Milwaukie, dated April 15, 2012
   - E. Site plans (initial submission date stamped March 27, 2012; final submission date stamped April 26, 2012)
     - i) Proposed site conditions
     - ii) Illustrative drawings
2. Notification information
   - A. Application referral dated May 11, 2012
   - B. Design review meeting notice (DR-12-04)
     - i) Meeting notice, May 11, 2012
     - ii) Meeting notice affidavit, May 11, 2012
3. Materials from City Planning Staff
   - A. E-mail deeming application incomplete, April 6, 2012
   - B. Letter deeming application complete, April 27, 2012
   - C. Staff report: May 16, 2012, for May 23, 2012, Design Review Meeting
   - D. Staff presentation: May 23, 2012, Design Review Meeting
4. Materials Received at the Meeting/Hearing
   - A. May 23, 2012, Design Review Meeting
5. Comments received
   - A. Tom Larsen, Building Official
   - B. Milwaukie light rail design team (Kenny Asher and Wendy Hemmen)
6. Public comments

MILWAUKIE
Dogwood City of the West

To: **Design and Landmarks Committee**

From: **Li Alligood, Assistant Planner**

Date: **May 16, 2012, for May 23, 2012, Worksession**

Subject: **Downtown Façade Improvement Program application review**

ACTION REQUESTED

Review Façade Improvement Program (FIP) applications and approve or deny based on the criteria and priorities established by the DLC, the City, and Metro.

BACKGROUND INFORMATION

A. Façade Improvement Program

The Façade Improvement Program (FIP) was established in March 2011, and began accepting applications in May 2011. All properties located in the downtown zones[1] east of McLoughlin Blvd are eligible.

The purpose of the FIP is to improve the pedestrian environment by encouraging business and property owners to make external improvements to their buildings. These improvements should enhance the character and aesthetics of downtown Milwaukie and create a more attractive and vibrant commercial district.

The matching grant program is funded jointly by Metro and the City. The maximum grant amount is $10,000, which must be matched by the applicant and is reimbursed upon completion of the approved project.

B. Application Overview

The program was funded at $50,000. To date, the DLC has approved grants in the amount of $42,508 for work on 8 properties; there are $7,493 remaining in the grant fund. One application has been submitted for consideration at the May meeting in the amount of $6,480. If approved, $1,103 of grant funds would remain.

[1] Downtown Commercial Zone DC; Downtown Storefront Zone DS; Downtown Office Zone DO; and Downtown Residential Zone DR.

C. Staff Review and Recommendation

Staff has reviewed the applications to verify program eligibility and compliance with downtown design standards. Each staff recommendation includes the following information:

A. Background: Information about the zoning and use of the site, as well as any other site characteristics of note.

B. Proposal: The work proposed by the applicant.

C. Narrative: Each applicant has provided a narrative as part of the application; the narrative is included verbatim in the staff recommendation.

D. Eligibility: Staff has determined that each application meets the grant program eligibility requirements and downtown design standards. Where appropriate, staff has noted specific components of the project that will increase downtown liveliness and the pedestrian environment.

E. Amount requested: Staff has evaluated the project estimates submitted with each application and determined if they are reasonable. Staff has recommended the funding amount based on the proposal and eligible costs. This is not a recommendation of approval, but of the funding level in the case of approval.

F. Additional information: Where appropriate, staff has included suggestions for improving the aesthetic appearance of subject buildings.

G. Next steps: Some projects may require additional land use approvals before they can move forward. This section identifies which approvals, if any, are needed.

See Attachments 1and 2 for staff recommendations and full application materials.

APPROVAL CRITERIA

The DLC, the City, and Metro have identified the following approval criteria for DLC review of the façade improvement grant applications:

- Will the proposal result in a noticeable improvement in the storefront or building?
- Will the proposal enhance downtown character and aesthetics?
- Will the proposal enhance the pedestrian experience?
- Is the cost of project low relative to impact (“bang for the buck”)?

DECISION-MAKING PROCESS

Keeping in mind that the purpose of the program is to encourage visual improvements to private properties in downtown Milwaukie while allowing flexibility, the DLC has the following options when reviewing the grant applications:

- Review and decide on the application.
- Postpone a decision on the application to a later date.

The DLC may adjust the amount of the grant awarded and offer comments and suggestions to the applicant. Per the terms of the grant program, the DLC may not provide conditions of approval or adjust design details.

ATTACHMENTS

Attachments are provided only to the Design and Landmarks Committee unless noted as being attached. All material is available for viewing upon request.

1. Staff recommendation for 10921 SE Main St – 12,500 Window Coverings (attached)
2. Applicant materials (attached)

MILWAUKIE
Dogwood City of the West

DOWNTOWN FAÇADE IMPROVEMENT PROGRAM APPLICATION
STAFF RECOMMENDATION

Date: May 23, 2012

Applicant: 12,500 Commercial Window Coverings, Inc.

Owner(s): Kathy Koenig

Address: 10921 SE Main St

Grant Request: $6,480

Funding Recommendation: $6,480

APPLICATION SUMMARY

A. Background

The site is located in the Downtown Storefront Zone DS. The building was constructed in 1907. The storefront was rebuilt in 1949.

B. Proposal

The applicant proposes to replace the storefront windows and entrance door, and install exterior lighting.

C. Narrative provided by applicant

New windows and doors will enhance our retail storefront by creating a clean, inviting appearance that is both visually attractive and energy efficient. Lighting will enhance the visual appeal of our storefront as well as create a safer environment after dark.

D. Eligibility as determined by staff

The proposal meets the grant program eligibility requirements and the downtown design standards. The addition of lighting to the building façade will enhance the nighttime visual appeal and safety of this portion of the block.

E. Amount requested

The applicant has requested a matching grant of $6,480. Staff recommends funding the full amount.

F. Additional information

The downtown design guidelines contain useful information and tips for making downtown buildings more attractive and pedestrian friendly. Pedestrian friendly buildings have transparent windows, providing “eyes on the street” that enhance pedestrian safety. They may also have canopies or awnings to protect pedestrians from the elements, attractive

window displays to attract the eye, or sidewalk decor such as planters to add depth to the front facade. Small, inexpensive changes can make a big impact.

Staff suggests the applicant consider the following:

- Installing a blade sign for additional pedestrian visibility
- Replacing the unused entrance door with a window, or removing items that are blocking the glass area of the door for increased transparency

G. Next Steps

If the grant is awarded, competitive bids will be expected for any project components over $5,000.

Downtown Façade Improvement Program
Application Form

An informational meeting with City staff is required prior to submission of this form.

Applicant:	12.500 COMMERCIAL WINDOW COVERINGS, INC.
(If applicant is not the building owner, attach either a lease specifying tenant's right to make improvements or letter from owner authorizing improvements.)	
Building location (address):	10921 SE MAIN STREET, MILWAUKIE, OREGON 97222
(See http://www.ci.milwaukie.or.us/gis/planning-maps)	
Property Owner (corp/legal name):	KATHY KOENIG
(Attach copy of deed of trust or document establishing ownership.)	
Name listed on applicant's business registration:	12.500 COMMERCIAL WINDOW COVERINGS, INC.
Applicant's Mailing Address:	P.O. BOX 22371 MILWAUKIE, OREGON 97269
Contact name:	PATRICK JONES
Phone:	503-654-2874
Email:	CWCOVERINGS@QWESTOFFICE.NET
Describe proposed work:	REPLACE OLD DELAPIDATED WOOD FRAME STOREFRONT WINDOWS AND DOORS WITH NEW ALUMINUM DOUBLE PANE WINDOWS AND DOORS. ADD EXTERIOR WALL AND AWNING LIGHTING.
(Attach photo of existing building. Attach color/material samples and a sketch, if applicable.)	
How does the project contribute to an attractive and vibrant downtown environment?	NEW WINDOWS AND DOORS WILL ENHANCE OUR RETAIL STOREFRONT BY CREATING A CLEAN, INVITING APPEARANCE THAT IS BOTH VISUALLY ATTRACTIVE AND ENERGY EFFICIANT. LIGHING WILL ENHANCE THE VISUAL APPEAL OF OUR STOREFRONT AS WELL AS CREATE A SAFER ENVIORNMENT AFTER DARK.
(Please refer, where applicable, to Downtown Design Guidelines.)	
Total Project Cost Estimate and Grant Amount Requested	TOTAL PROJECT COST: $12,960.00 GRANT AMOUNT REQUESTED: $6,480.00
(Maximum grant is $10,000 and no more than 50% of total cost. Attach a detailed budget or formal estimate for any project element exceeding $1,000.)	

I, the undersigned, hereinafter "Applicant," submit this application for reimbursement of up to $6,480.00 for façade improvement work described above under the City of Milwaukie's Downtown Façade Improvement Program.

I certify that the information provided above is accurate to the best of my knowledge. I understand that all costs for which I seek reimbursement must be documented. Under no circumstances will the reimbursement amount exceed $10,000 or 50% of total applicant incurred costs directly related to the project.

I understand that any work must be carried out under all applicable local, state, and federal laws; and in substantial conformance with the proposal approved by the City of Milwaukie ("City"). I have reviewed the "Program Guidelines" and hereby acknowledge that no reimbursement shall be made for work that is not eligible under the guidelines or that was completed in a manner that does not comply with the guidelines. I agree to repay the City if any amounts reimbursed to me are found to have been reimbursed in error.

I hereby release the City and Metro from any liability and relinquish any claim against the City and Metro for additional compensation related to the façade improvements described above. Further, I agree to indemnify Metro and the City, and their respective officers, agents and employees, and hold the City and Metro harmless in relation to any claims related to work performed by me or on my behalf by any contractor or sub-contractors in relation to the façade improvements described above.

Signed	MAY 14, 2012 Date
PATRICK JONES, PRESIDENT Printed Name & Title	12.500 INC. Signed on behalf of

This pilot program is being funded by the City of Milwaukie and Metro.

CULVER GLASS COMPANY
2619 NW Industrial Street, Bldg. #B, Suite 3
Portland, OR 97210
(503) 226-2520 • FAX 503/228-9155

Estimating Fax: 503-542-0465

Date: 3/21/2012

Time: 12:05 PM PDT

Job Name: Office Storefront

Attn: James

General Contractor:12.500

Fax Number:

Culver Glass Company's Estimator: Todd L. Barnes

Furnished Only F.O.B. Jobsite:

Furnished and Installed: Arcadia AG 451T storefront, Medium style doors, Clear anodized finish PPG 500 clear insulated glass,

Exclusions: Cleaning, Protection, Replacement, Permits of any kind, Special Hours, TRANSOMS

NOTE: This job bid for Normal Working Hours.

Basic Bid: $8,911.00

LABOR $3,536.00
MAT. $5,375.00 ADD FOR BLACK $537.00

Quotes valid for 60 days.

Due to the volatile aluminum market CGC Industries Inc. dba: Culver Glass Company must reserve the right to pass on any cost increase it may incur past the 30 day acceptance period.

Allowable testing will be per the AAMA field test standards only and will not be modified by spec. Test procedure will be a 1\3 reduction from the laboratory test rating.

4/5/12 @ 10:39am
Emailed to Li Allgood

Horton Electric Co.

11226 SE 21st Ave. Milwaukie, Oregon. 97222

503-659-8448 503-659-8864 Fax

Since 1963 CCB#818

April 16, 2012

To: 12.500 Commercial Window Coverings Inc.

Attn: Mary

Fr: Horton Electric Company

Re: Electrical Bid

Dear Mary,

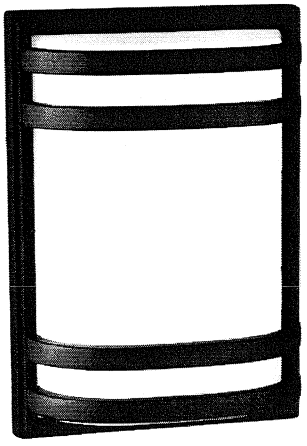
We are pleased to submit a bid of $2135.00 to wire three new lights (furnished by others)on concrete columns in front of building, wire light for sign (lights furnished by others), furnish and install vapor tight fluorescents lights to replace existing lights under front walk area.

Thank you for the opportunity to bid this work.

Jay Horton
Horton Electric Company

Destination LIGHTING®

Customer Service: 1-800-653-6556



Shown in Black Finish

Westport Outdoor Wall Light

Black 2-Light Outdoor Wall Light
Availability: **USUALLY SHIPS IN 7-10 BUSINESS DAYS**
Price: $359.00

Product Overview

Black 2-Light Outdoor Wall Light

Black 2-Light Outdoor Wall Light

This product, or component of this product, contains mercury. Do not place in trash. Please recycle or dispose of in a certified hazardous waste facility.

Product Details

Product Number:	P529073	**Manufacturer:**	Forecast
Model Number:	F844019U	**Collection:**	Westport
Manufacturer Finish:	Black	**Width:**	10 in.
Height:	14-1/2 in.	**Depth:**	4 in.
Bulb Type:	Compact Fluorescent	**Bulb Included:**	No
Total Wattage:	36 w.	**Base Type:**	4 Pin