



Washington Department of Ecology

2022 Supplemental Capital

Budget

September 13, 2021

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 13, 2021

TO: David Schumacher, Director
Office of Financial Management (OFM)

FROM: Laura Watson, Director 

SUBJECT: Ecology's 2022 Supplemental Capital Budget Request

As the state's lead environmental agency, the mission of the Washington State Department of Ecology (Ecology) is to protect and preserve the environment for current and future generations, while valuing and supporting Washington's economic success. We're tackling challenges that are unique to our times and require us to take a broad and holistic approach to our work that focuses on not only *what* we do, but also *how* we do it.

Ecology's strategic goals are to:

- Support and engage our communities, customers, and employees.
- Reduce and prepare for climate change impacts.
- Prevent and reduce toxic threats and pollution.
- Protect and manage our state's waters.
- Protect and restore Puget Sound.

Our agency's deep commitment to environmental justice is tied to each of our strategic goals and guides the ways in which we work to accomplish those goals.

Attached is Ecology's \$16 million 2022 Supplemental Capital Budget request. It balances a recovering economy with the understanding that the COVID-19 pandemic is still very much a part of our daily lives, and aims to help support our communities during this time, while continuing to protect environmental and public health through a focus on equity and environmental justice. These requests are supported primarily by dedicated environmental funds or state bonds for projects that:

- Promote local economic development through the cleanup of contaminated sites for redevelopment.
- Improve water quality.
- Deliver water for fish, farms, and people.
- Address local environmental and public health priorities.
- Protect and restore state owned facilities.
- Create jobs.

Place holders

2021 Drought Declaration

A historically dry spring, followed by a record-breaking heat wave in late June, affected water supplies across Washington this summer. Farmers and ranchers without irrigation in Eastern Washington were among the first to feel the effects of the drought, with some reporting up to a 50 percent loss of wheat crops and difficulty finding feed for livestock. Rising water temperatures in the lower Yakima, Okanogan, and Snake rivers also reached levels lethal to some fish, including threatened salmon species.

In early July, the state's Executive Water Emergency Committee recommended to Governor Inslee that a full emergency drought declaration be issued for the vast majority of the state, and Ecology issued that drought emergency order on July 14, 2021. The order declared drought conditions under Chapter 43.83B RCW and authorized Ecology to expedite emergency water permits and pass-through funds to public bodies to alleviate drought hardships. The drought emergency order remains in effect until June 1, 2022.

Due to the late and rapid onset of drought conditions this year, Ecology was not able to request funding from the Legislature during the 2021 session to support needed drought response, as we normally would have, and have done so in the past, when drought conditions have manifested earlier in the year. Consequently, Ecology does not have dedicated funding within its base operating or capital budgets to respond to this year's drought.

However, in response to this emergency need, Ecology was able to identify and repurpose, temporarily, a limited amount of funding within its current budgets to help alleviate the impacts on our communities and natural resources. Total funding available for this year's drought response is \$750,000 (\$204,000 operating and \$546,000 capital) from the Drought Preparedness and Response Account, and roughly \$410,000 in General Fund-State funding from anticipated vacancy savings within the Water Resources Program during fiscal year 2022.

On July 28, 2021, Ecology adopted an emergency rule—Chapter 173-167 WAC – Emergency Drought Funding—which makes the limited funding we have available to respond to emergencies caused by drought conditions. Emergency rules are limited to 120 days duration, and this emergency drought funding rule expires November 25, 2021.

To respond as efficiently and effectively as possible, all currently available funds are being distributed to other state agencies best equipped to respond to emergency drought situations involving human health, fish health, and agriculture emergencies. Funding is being provided to the Washington State Department of Health (drinking water emergencies), the Washington State Department of Fish and Wildlife (fish health and streamflow impacts to fish), and the State Conservation Commission (loss of crops and/or livestock issues) for projects such as trucking water to local entities that have lost supply; moisture sensors to monitor soil water content for crops; and temporary pools to lower water temperature to protect fish instream.

Ecology anticipates being able to provide an estimate on any backfill or additional funding needs related to this drought response by November 30, 2021, so that those can be considered for the Governor's supplemental budget proposals. Ecology will then provide an update on those needs to the Legislature in January 2022.

Please note, of equal concern to this year's drought is the possibility that drought conditions may continue through the spring and summer of 2022. Oftentimes, drought can be a multi-year event, where the second year has equal or worse impacts on the state. Ecology will continue to convene the Washington Water Supply Availability Committee to monitor conditions through the winter to assess snow pack, climate forecasts, and other conditions to determine the likelihood of a back-to-back drought occurring in 2022.

Ecology will be able to provide an initial assessment of such conditions and forecasts by January 2022. However, the water year begins November 1 of each year, and conditions can change rapidly throughout the winter and spring, which means a decision on drought and its severity may not be made until early April.

Ecology anticipates the Drought Preparedness and Response Account will be depleted after meeting the 2021 drought needs, and funding drought response with staff vacancies is not sustainable. If a drought is projected again, Ecology will submit a request for funding during the 2022 legislative session to address those needs. This potential need is normally highlighted in Ecology's budget submittal, as, again, no base appropriations exist in the agency budget to implement drought response activities.

Thank you for considering Ecology's 2022 Supplemental Capital Budget request. We will work with our assigned OFM capital budget analysts as they review this request in detail. Please let us know if you have questions.

Attachment

Distribution to:

JT Austin, Senior Policy Advisor, Natural Resources, Office of the Governor
Myra Baldini, Budget Assistant to the Governor, OFM
Jim Baumgart, Senior Policy Advisor, Military & Housing, Office of the Governor
Michael Bezanson, Capital Budget Coordinator, Senate Ways and Means Committee
Lisa Borkowski, Budget Assistant to the Governor, OFM
Jim Cahill, Senior Budget Assistant to the Governor, OFM
Denise Clifford, Governmental Affairs Director, Department of Ecology
Erik Fairchild, Chief Financial Officer, Department of Ecology
Richelle Geiger, Fiscal Analyst, House Capital Budget Committee
Jennifer Hennessey, Senior Policy Advisor, Environment/Water, Office of the Governor
Jed Herman, Senior Fiscal Analyst, Senate Ways & Means Committee
Dan Jones, Fiscal Analyst, House Appropriations/Natural Resources Committee
Kelci Karl-Robinson, Capital Budget Coordinator, House Capital Budget Committee

David Schumacher, Director

September 13, 2021

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Becky Kelley, Senior Policy Advisor, Climate, Office of the Governor

Jennifer Masterson, Senior Budget Assistant to the Governor, OFM

Keith Phillips, Executive Director of Policy, Office of the Governor

Garret Ward, Budget Policy Manager, Department of Ecology

Washington Department of Ecology

2022 Supplemental

Capital Budget

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Capital

9/13/2021 \$ in thousands

		2022 Supplemental Budget Request 9/13/2021			
		SBCA	MTCA ¹	Other	Total
Prevent and Reduce Toxic Threats and Pollution					
1	Cleanup Toxic Sites - Puget Sound - Eatonville Landfill		4,000		4,000
2	Pacific Wood Treating Site Cleanup			2,326	2,326
Protect and Manage Our State's Waters					
3	Water Banking Pilot Grant Program Budget Shift ²			9,000	9,000
Facility Related					
4	Failing Main Electrical Service Panel	663			663
5	Lacey HQ Parking Garage Preservation Project Financing ³				-
Total Proposed Capital Budget Request		663	4,000	11,326	15,989

Notes:

¹ Model Toxics Control Capital (23N-1) and Stormwater (23R-1) Accounts.

² Budget shift of grant program funding from the operating budget to the capital budget. General Fund-State revenue will be transferred to a new account created in the 2022 supplemental operating budget through Decision Package PL LB - Water Banking Pilot Budget Shift. Funding will then be appropriated in a new section of the 2022 supplemental capital budget through Capital Project Request 40000469 - Water Banking Pilot Grant Program Budget Shift.

³ Section 7002(7) of the 2021-23 capital budget directed Ecology to submit a financing contract proposal to fully fund this project, including financing expenses and required reserves pursuant to Chapter 39.94 RCW, as part our 2022 supplemental capital budget request. Appropriation authority to support the Certificate of Participation (COP) payments will be requested as part of Ecology's 2023-25 operating budget request.

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Ten Year Capital Plan by Project Priority**
2021-23 Biennium *

Version: S1 2022 Supplemental

Report Number: CBS001
Date Run: 9/10/2021 8:28AM

Project by Agency Priority

Priority	Project by Account-EA Type	Estimated Total Expenditures	Prior Expenditures	Current Expenditures	Reapprop 2021-23	New Approp 2021-23	Estimated 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31
1	40000469 Water Banking Pilot Grant Program Budget Shift NEW-1 Water Banking Acct-State	9,000,000				9,000,000				
2	40000467 Failing Main Electrical Service Panel 057-1 State Bldg Constr-State	663,000				663,000				
3	40000465 2022 Clean Up Toxic Sites – Puget Sound 23N-1 MTC Capital Account-State	4,000,000				4,000,000				
4	40000464 Pacific Wood Treating Site Cleanup – Cleanup Settlement Account 15H-1 Cleanup Set Acct-State	2,326,000				2,326,000				
Total						15,989,000				

Total Account Summary

Account-Expenditure Authority Type	Estimated Total Expenditures	Prior Expenditures	Current Expenditures	Reapprop 2021-23	New Approp 2021-23	Estimated 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31
057-1 State Bldg Constr-State	663,000				663,000				
15H-1 Cleanup Set Acct-State	2,326,000				2,326,000				
23N-1 MTC Capital Account-State	4,000,000				4,000,000				
NEW-1 Water Banking Acct-State	9,000,000				9,000,000				
Total						15,989,000			

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Department of Ecology

2022 Supplemental Capital Budget Requests Supporting the Puget Sound Action Agenda

September 7, 2021

Project Requests	Sub-strategy and Near Term Action (NTA)	Ongoing Program	Orca Task Force Recommendation	2018 Regional Priority Approach	Federal Leveraging	Local Leveraging	Puget Sound Dollars	Total Request Dollars
1. 40000465 2022 Clean Up Toxic Sites – Puget Sound	<p>9.1: Implement and strengthen authorities and programs to prevent toxic chemicals from entering the Puget Sound ecosystem</p> <p>10.3: Fix problems caused by existing development. Sub-strategy</p> <p>10.4: Control sources of pollutants</p> <p>21.2: Clean up contaminated sites within and near Puget Sound</p>	OGP_ECY20: Toxic Cleanup Program - Cleaning up priority bays in Puget Sound	31	TIF 1.1 TIF 3.1		Working with the Town of Eatonville, the Weyerhaeuser Company, the Niqually Tribe, and the State Parks to maximize efficiencies and cost savings by only deploying heavy machinery to the site once for both improvements and cleanups in summer of 2022.	\$ 4,000,000	\$ 4,000,000
Total Capital Request in Support of the Puget Sound Action Agenda							\$ 4,000,000	

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2021-23 Biennium

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Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 9/9/2021 3:39PM

Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

Starting Fiscal Year: 2022

Project Class: Grant - Pass Through

Agency Priority: 1

Project Summary

In 2021, the Legislature appropriated funding in both the operating and capital budgets for Ecology to administer the pilot grant program for water banking strategies to preserve the state's agricultural water supply, maintain productive agricultural lands, protect environmental interests, and support the rural economy. However, because grant funding was appropriated in both budgets, it creates some challenges in being able to effectively use this funding to meet local water needs. To address these challenges and ensure we can effectively and efficiently administer grants during this pilot, Ecology is requesting a technical adjustment to move the operating budget portion of pass through funding to the capital budget so that it can be used in combination with the existing capital budget appropriation for this pilot grant program. (NEW-Water Banking Account)

Project Description

What is the proposed project?

Ecology is requesting \$9,000,000 from a new account that would be created in the 2022 supplemental operating budget, and supported by a transfer of revenue from General Fund – State (GF-S), to implement the pilot water banking pilot grant program that is currently funded in the 2021-23 operating budget.

Over the past 100 years, water laws in Washington have changed, as have the number of users and the ways in which water is used. As communities grew, the demand for water has increased, and court decisions have shifted the balance between competing interests, while overall water supply remained relatively static. In particular, significant growth in Washington's population and economy has increased the overall value of water and the competition between different (agriculture, instream flow, recreational, commercial, domestic supply, etc.) users.

Water banks are one tool to facilitate the voluntary exchange of water rights. They're becoming more common throughout Washington, as it becomes increasingly difficult to obtain new water rights to meet growing demands. Water banks exist in many forms and in most western states. Although the approaches may differ, they all share a common goal: to move water between buyers and sellers to where it is needed most.

In general, a water bank provides a mechanism in which a water right holder can "deposit" a water right with a public or private entity (the bank) that can make the water rights available for another person or use in a downstream location. The transactions can be either permanent or temporary. The concept underlying water banks is that facilitating the purchase and sale of water rights through a free market system can help balance the demand for water and lead to a more efficient allocation of water resources.

While anyone may purchase a full or partial water right directly from a willing seller, water banks can streamline the process, provide protection from relinquishment, and allow for greater flexibility. This is especially helpful when a large water right is reallocated to several smaller uses over a large area, which often takes many years to complete. In other cases, water banking is used more like a water swap to transfer one water right to one new water use when the existing right cannot be directly changed to the new use.

One recent development in the competition to secure water supply and own water rights has been the threat of out-of-state purchases by private investment firms. Ecology, the Legislature, the Governor, and public stakeholders share in the concern that after taking ownership of the water right, an out-of-state purchaser will transfer the water right to a use that is not consistent with Washington's priorities. Specifically, there is concern that agricultural water rights will be purchased by an

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Project Title: Water Banking Pilot Grant Program Budget Shift

Description

out-of-state entity and transferred from an agricultural purpose to commercial and/or a domestic supply purpose, which would take agricultural lands out of service, fueling further development of the rural landscape and eroding environmental quality statewide.

To address these concerns, in 2021 the Legislature authorized Ecology to create a water banking pilot grant program to establish local water banks to preserve the agricultural water supply, maintain productive agricultural lands, protect environmental interests, and support the rural and local economy. Funding to support the pilot grant program was provided in both section 302(32) of the 2021-23 operating budget (\$9 million from GF-S), and section 3112 of the 2021-23 capital budget (\$5 million from State Building Construction Account (SBCA)). This pilot grant program will allow public entities in Washington to purchase agricultural water rights and protect them from non-state interests that would transfer use to a purpose that would take agricultural lands out of service, develop the rural landscape, and degrade the local environment.

The Legislature directed that the pilot program focus on developing water banks in rural counties, as defined in RCW 82.14.370(5)), that have the headwaters of a major watershed within their borders, and that the grants be only for water banking strategies within the county of origin. Grants issued under this pilot program must be used for purposes that support agricultural use, instream flow for fish and wildlife, and preserve water rights for use in the county of origin through the primary and secondary reaches of the water right.

Today's challenges are very different from those when the water code was established in 1917, when water seemed like an unlimited resource. Now, we are ensuring water resources are managed to meet agricultural needs and a growing population, and at the same time, protecting existing water rights, important fisheries, and other environmental resources.

Please note, in addition to the pass through funding appropriated for these grants, the Legislature also provided \$1 million in section 302(33) of the 2021-23 operating budget for Ecology to develop and implement the pilot program. The Legislature also appropriated \$40,000 in section 302(31) for Ecology to develop recommendations and implement actions under existing authority to modify the process for the review of water banks to ensure that key information is made available to the public. Ecology must prepare and issue a report to the Legislature regarding the outcome of implementing this pilot program. These two appropriations will remain in the operating budget, and are not part of this request.

What opportunity or problem is driving this request?

While the Legislature provided the funding needed to establish this pilot program and award grants for implementing water banking strategies to meet local water needs, the mechanisms by which the funding was provided create a number of challenges for being able to offer this funding and ensure that it can be successfully utilized under current time constraints. Because it will take time during fiscal year 2022 for Ecology's Water Resources Program to develop the pilot program (criteria, application process, etc.), solicit for projects, and get funding agreements in place, it is unlikely that recipients would be able to spend awarded funding by June 30, 2022, which would be required for half of the grant funding available for the pilot from the operating budget since GF-S is a single-year appropriation.

Furthermore, the lifecycle of these water banking grants, and need to spend the awarded funding, will likely extend beyond a single biennium, requiring the ability to have the funding provided available in future biennia to ensure that the supported work can be completed. If the \$9 million portion of this pass through funding remains in the operating budget, it will not be able to cross fiscal year and biennial lines to support the full length of these grants. Without this ability, funds will either go unspent, or Ecology will only be able to offer grants for projects that can be completed by the end of each fiscal year, which will likely limit participation in the grant program, and result in not achieving the goals that the Legislature had intended.

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Capital Project Request

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Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

To address this timing issue, and ensure that Ecology can effectively develop and administer this pilot grant program, Ecology is requesting that the \$9 million in pass through funding appropriated in the operating budget be shifted to the capital budget so that it can be used in combination with the existing capital budget appropriation for this pilot grant program. To accomplish this shift, Ecology is proposing the following steps, modeled after how the Legislature provided funding to the Department of Fish and Wildlife for the Hazard Fuel Reductions, Forest Health and Ecosystem Improvement (300000665) project in section 3266 of the 2021-23 capital budget.

- Step 1: Create a new dedicated account for water banking grants as part of the 2022 supplemental operating budget (suggested account title: Water Banking Account – State). Suggested language for operating budget bill (modeled after section 958 of the 2021-23 operating budget bill):

o A new section is added to chapter 43.79 RCW to read as follows:

The water banking account is created in the state treasury. Revenues to the account shall consist of appropriations and transfers by the legislature and all other funding directed for deposit into the account. Moneys in the account may be spent only after appropriation. Expenditures from the account are dedicated to activities that include but are not limited to the development of water banks, acquisition of water rights appropriate for use in a water bank, and any other activity that helps meet local water needs and protect Washington waters.

- Step 2: Add a transfer to section 805 – FOR THE STATE TREASURER – TRANSFERS as part of the 2022 supplemental operating budget. Suggested language for operating budget bill (modeled after transfer of GF-S to forest resiliency account trust fund in section 805 of the 2021-23 operating budget bill):

o General Fund: For transfer to the water banking account, \$4,500,000 for fiscal year 2022 and \$4,500,000 for fiscal year 2023.....\$9,000,000

- Step 3: Appropriate the revenue transferred into the new Water Banking Account in a new section in the 2022 supplemental capital budget. Suggested language for capital budget bill (modeled after proviso language in section 302(32) of the 2021-23 operating budget bill and section 3112 of the 2021-23 capital budget bill):

o NEW SECTION. Sec. XXXX. FOR DEPARTMENT OF ECOLOGY

Water Banking (XXXXXXXX)

The appropriation in this section is subject to the following conditions and limitations:

(1) The appropriations in this section are provided solely for the department to administer the pilot grant program for water banking strategies to meet water needs as described in this section. Grants must be awarded to qualified applicants according to (c) of this subsection. Grant awards must be limited to not more than \$2,000,000 per applicant.

(a) Grant awards may only be used for:

(i) Development of water banks in rural counties as defined in RCW 82.14.370(5) that have the headwaters of a major watershed within their borders and only for water banking strategies within the county of origin. A major watershed has the same meaning as shoreline of the state in RCW 90.58.030(2)(f)(v)(A) and (B);

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Description

(ii) Acquisition of water rights appropriate for use in a water bank including all costs necessary to evaluate the water right for eligibility for its intended use; and

(iii) Activities necessary to facilitate the creation of a water bank.

(b) For the purposes of a grant pursuant to this section, a water bank must meet water needs, which include but are not limited to agricultural use and instream flow for fish and wildlife. The water bank must preserve water rights for use in the county of origin and for permanent instream flows for fish and wildlife through the primary and secondary reaches of the water right.

(c) To be qualified for these funds, an applicant must also show:

(i) That the applicant has sufficient expertise and capacity to develop and maintain a water bank consistent with the purposes of this appropriation;

(ii) That the applicant has secured a valid interest to purchase a water right;

(iii) That the water rights appear to be adequate for the intended use;

(iv) That the applicant agrees to have one-third of any water right purchased with the funds appropriated under this section to have its purpose of use changed permanently to instream flow benefiting fish and wildlife; and

(v) That the applicant is a public entity or a participant in a public/private partnership with a public entity.

Appropriation:

New Account (Water Banking Account) – State.....	\$9,000,000
Prior Biennia (Expenditures).....	\$0
Future Biennia (Projected Costs).....	\$0
TOTAL.....	\$9,000,000

• Step 4: Reduce Ecology GF-S appropriations by \$4,500,000 in fiscal year 2022 (EA 001-AR1) and by \$4,500,000 in fiscal year 2023 (EA 001-AR2). Eliminate proviso language in section 302(32) of the 2021-23 operating budget.

This request adds the funding that is reduced from Ecology’s operating budget and shifted to a new account under Decision Package PL-LB “Water Banking Pilot Budget Shift”. The combined intent of both requests is to shift the operating budget pass through funding for this water banking grant pilot program from the operating budget to the capital budget.

What are the specific benefits of this project?

Proviso language for the water banking pilot grant program directs that funds go to a public entity and/or an entity that is a participant in a public/private partnership. Ecology anticipates that five to seven counties meeting the definitions prescribed in the budget proviso (a public entity...in rural counties as defined in RCW 82.14.370(5) that have the headwaters of a major watershed (RCW 90.58.030(2)(f)(v)(A) and (B)) within their borders))) will apply for and eventually be approved for a water bank.

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Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

Ecology anticipates all likely candidates for these water banks will be in counties that reside in Eastern Washington. Funding to begin operating the local water bank will be provided through grant agreements as part of any acquisition initiated by the local water bank. As part of the grant program, Ecology will establish guidance regarding the costs eligible for operating the water bank.

Recipients of these grants will benefit from shifting this funding from the operating budget to the capital so that the funding is available for a long enough timeframe to ensure that it can be effectively spent to implement water banking strategies to meet local water needs.

What are the effects of non-funding?

If this request is not supported, Ecology will be unable to effectively offer the operating budget portion of this pass through funding and ensure that it can be successfully utilized to meet local later needs. Without effective and efficient public investment in these water banks, many agricultural water rights could be purchased by private investment firms and taken out of production. If the water rights are transferred to domestic use or commercial uses, the agricultural capacity of the state would be permanently reduced and the state would lose productive agricultural land, which negatively impacts local economic opportunity, local environmental health, local growth management, and the protection of the rural standard of living.

Loss of agricultural lands and water rights reduces the output and value of the agricultural economy, increases food insecurity, and erodes environmental protection and the rural lifestyle. Without the proposed shift of funding to the capital budget, the state will not be able to meet future water supply demand for predominately agricultural economy driven communities throughout Washington.

Why is this the best option or alternative?

There are two options for administering the operating budget portion of this water banking pilot program; (1) try to implement the program from the operating budget as enacted; or (2) transfer the funds to the capital budget to ensure successful implementation of the pilot.

- Option 1 – Implementing the pilot, as is, from the 2021-23 operating budget would likely fail. Using GF-S to issue grants is problematic due to funding being limited to fiscal year and biennial expenditure restrictions, where any unspent GF-S would lapse at the end of each fiscal year and not be available over the entire lifecycle of these grants.

- Option 2 – Creating a new capital account for this purpose, and transferring these funds to that new account is the best alternative because it will allow funds to be reappropriated across fiscal year and biennial lines so grant agreements can be implemented without interruption. This option is the most stakeholder responsive, cost effective, and efficient way to implement the entire water banking pilot grant program.

Specific to option 2 above, a sub-alternative to how the funding is appropriated in the capital budget would be to add the shifted funding as an additional appropriation, from the newly established account, to section 3112 of the 2021-23 capital budget, and combine it into the same section that already houses the \$5 million in SBCA for this purpose. Ecology is not proposing this sub-alternative, instead proposing to create a new section, and include the same proviso language from the operating budget in that section. Ecology is not aware of why the Legislature included different proviso language between the operating and capital budgets, but we believe that the proposed approach will best honor the different intents of the Legislature from last year.

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Report Number: CBS002

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Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

How will clients be affected and services change if this project is funded?

This is a pilot program, so no services of this specific type are currently offered. Current grant activity and other water banking-related work done within Ecology's Water Resources Program will continue uninterrupted and will not be impacted. The new pilot grant program provides adequate implementation funding and resources in the 2021-23 operating budget, which will not be shifted as part of this request.

How is the proposal impacting equity in the state?

Effective implementation of the water banking pilot grant program by shifting the operating budget funding to the capital budget will protect rural communities across Washington from potential environmental degradation due to water rights transference from agricultural uses to commercial or domestic uses. Ecology currently anticipates all water banks set up under this pilot grant program will be in Eastern Washington, thereby serving and impacting predominately small, rural areas of the state.

Per the proviso language, and governing statutes, water banks will be established in counties with a population density of less than 100 persons per square mile, or a county smaller than 225 square miles, as determined by the Office of Financial Management (OFM). Creating water banks in these low-density population counties will preserve rural character and economies by preventing water rights from being transferred from agricultural uses to other uses to promote development of previous agricultural lands. Counties eligible for the water banking pilot grant program represent socially and economically diverse populations, and include many Tribal and indigenous populations.

What is the agency's proposed funding strategy for the project?

Ecology is requesting that the \$9 million in pass through funding appropriated in the operating budget be shifted to the capital budget so that it can be used in combination with the existing capital budget appropriation for this pilot grant program. To accomplish this shift, Ecology is proposing the steps described previously in this request, and modeled after how the Legislature provided funding to the Department of Fish and Wildlife for the Hazard Fuel Reductions, Forest Health and Ecosystem Improvement (300000665) project in section 3266 of the 2021-23 capital budget.

Since this is a new pilot program, providing matching funds, and other conditions are currently under consideration and development while Ecology establishes the guidance and criteria for this pilot grant program.

\$35,000 of the funds will be used to set up and maintain the new grant or loan application in the agency's systems.

Are FTEs required to support this project?

No capital FTEs are required under this request. Funding for staff to implement the water banking pilot program was included in section 302(33) of the 2021-23 operating budget, and is not part of this request. Ecology will use those operating budgets funds to implement the grant program that is support through the capital budget.

How does the project support the agency and statewide results?

This request is essential to implementing Goals 1: Support and engage our communities, customers, and employees, and Goal 4: Protect and manage state waters in Ecology's strategic plan because effective implementation of the water banking pilot grant program will enhance the local economy and food supply, protect agricultural water rights and land use, and preserve agricultural lands for future generations.

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Version: S1 2022 Supplemental

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Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

This request is also essential to support the to the Governor's Results Washington Goal 2: Prosperous Economy and Goal 3: Sustainable Energy and Clean Environment by preserving water rights and land use for agricultural purposes into the future. These grants will protect agricultural water rights so that rural agricultural lands are not converted to other non-agricultural uses in the future. Maintaining agricultural lands for future generations will protect the environment by limiting development and conversion of existing agricultural land to some other commercial, industrial, or domestic use. By limiting agricultural land use and water rights to their current use, these grants will indirectly prevent additional climate impacts from the conversion of agricultural lands and water rights to some other use.

The outcome of this request will be a more effective and efficient pilot grant program that results in water banking strategies needed to meet local water needs.

How will the other state programs or units of government be affected if this project is funded?

Ecology anticipates the likely candidates for these water banks will be in counties that reside in Eastern Washington. Funding to begin operating the local water bank will be provided through grant agreements as part of any acquisition initiated by the local water bank. As part of the grant program, Ecology will establish guidance regarding the costs eligible for operating the water bank.

Recipients of these grants will benefit from shifting this funding from the operating budget to the capital so that the funding is available for a long enough timeframe to ensure that it can be effectively spent to implement water banking strategies to meet local water needs.

Ecology will partner with the State Conservation Commission (SCC) on a separate 2021-23 operating budget proviso (2021-23 operating budget, section 307(3)) that directs the SCC to enter into an agreement to establish a water bank in Okanogan County for protecting agricultural water rights in the county. This proviso in the SCC section of the operating budget is consistent with the anticipated implementation of the water banking grant pilot program that Ecology is establishing.

Proviso

Proposed proviso language provided earlier in this capital project request.

Project Type

Grants

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 Capital Project Request

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*

Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 9/9/2021 3:39PM

Project Number: 40000469

Project Title: Water Banking Pilot Grant Program Budget Shift

Description

Grant Recipient Organization: TBD

RCW that establishes grant: N/A

Application process used

While the pilot grant program is still being established, applicants will need to demonstrate the following eligibility requirements to qualify for funding, consistent with the current proviso language in section 302(32) of the 2021-23 operating budget, and the proposed language included with this budget request. The pilot grant program will be implemented using Ecology’s existing grant platform, the Ecology Administration of Grants and Loans (EAGL) system, and costs include set up and modification of grant/loan applications in the EAGL system. • Eligible counties include: Adams, Asotin, Chelan, Clallam, Columbia, Cowlitz, Ferry, Garfield, Grays Harbor, Jefferson, Kittitas, Klickitat, Lewis, Lincoln, Mason, Okanogan, Pacific, Pend Oreille, Skagit, Skamania, Stevens, Wahkiakum, Walla Walla, Whitman, and Yakima. • Grant awards may not exceed \$2 million per applicant. Applicants must have: 1. Status as a public entity or in a partnership with a public entity a. Eligible public entities include: i. The State of Washington, or any agency, political subdivision, taxing district, or municipal corporation thereof; ii. Any county, city, town, municipal corporation, quasi-municipal corporation, public corporation, political subdivision; iii. Federally recognized Indian tribes. b. For applicants other than public entities, documentation of a partnership with an eligible public entity will be required. 2. Sufficient expertise and capacity to develop and maintain a water bank. a. Applicants will self-identify their capacity and expertise to meet this eligibility requirement. b. Proposals must demonstrate their plan to operate a water bank, conduct outreach, and meet reporting requirements into the future. c. Ecology will not award grant funds for costs related to building or maintaining capacity (e.g., hiring staff) in order for them to meet this requirement. 3. Secure a valid interest to purchase a water right. a. Acquisition must be ready to execute with an identified seller and specific water right. b. “Valid interest” could be documented with a purchase and sales agreement, signed letter of intent, or other documentation. 4. Show that the water right is adequate for the intended use. a. Applicants must provide sufficient information to show that a proposed water right is adequate for the intended use. This could require identifying local conditions (such as new uses junior to instream flows or senior rights) that will benefit from banked water rights. b. To qualify for a grant award, the water right must appear valid and adequate with respect to seasonality, location, seniority, and availability. 5. Agree to permanently commit one-third of the purchased water, calculated as a share of final determination of total valid quantity, to instream flow benefiting fish and wildlife. Costs include set up and modification of the grant/loan applications in the agency’s grant and loan system.

Growth Management impacts

N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2021-23 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
NEW-1	Water Banking Account-State	9,000,000				9,000,000
	Total	9,000,000	0	0	0	9,000,000
Future Fiscal Periods						
		<u>2023-25</u>	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	
NEW-1	Water Banking Account-State					
	Total	0	0	0	0	

Operating Impacts

No Operating Impact

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*

Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 9/7/2021 8:32AM

Project Number: 40000467

Project Title: Failing Main Electrical Service Panel

Description

Starting Fiscal Year: 2022

Project Class: Preservation

Agency Priority: 2

Project Summary

The main electrical service panel is failing at the Department of Ecology's Eastern Regional Office in Spokane. This building is owned by the State of Washington, and its electrical power panel is over 45 years old and is experiencing increasing rates of component failure. There have been multiple main breaker failures in the last several years, leaving elevators and areas of the regional office out of service for weeks at a time. Ecology contracted with an engineering firm to assess the switchgear's continuing reliability, and the report, completed in 2021, indicates the main electrical switchgear should be replaced in the next 12-18 months. This request will fund the required panel replacement. In addition to the age and lack of available parts for the switchgear, it is out of compliance with the National Electrical Code, which poses significant risks to 1) Ecology operations, 2) danger from electrical fires, and 3) maintenance workers. The electrical main switchgear is a single point of failure and without it we would be forced to suspend operations in Spokane. (State Building Construction Account)

Project Description

What is the proposed project?

The main electrical service panel (switchgear) at Ecology's Eastern Regional Office (ERO) is out of compliance with the electrical code, and is failing. We contracted with MW Consulting Engineers, who provided a report in 2021 (attached) indicating that the switchgear should be replaced within the next 12-18 months. The report shows that the switchgear is well past its expected lifecycle, and that parts are exceedingly hard to find. There are also multiple safety concerns and code violations with the switchgear in its current configuration. Ecology is requesting \$662,548 to replace the failing switchgear at ERO.

ERO's electrical main switchgear is a critical element of the building's electrical infrastructure and a single point of failure. Because it is out of compliance, it must be replaced with switchgear that meets current National Electrical Code (NEC) and cannot be replaced with something of the same style. This means that failure would leave the ERO unusable for weeks or months while the infrastructure was changed to comply with current building and fire codes. The engineering consultants have provided multiple options for Ecology to choose from, including switchgear that can be installed inside the building or outside in the parking lot. These options vary in size and electrical capacity. Ecology will partner with Department of Enterprise Services (DES) to analyze needs, including additional electrical load from future electric vehicle (EV) charging stations and potential solar systems.

Costs for this required improvement are based upon the 2021 Final Engineering Report from MW Consulting Engineers (attached), DES and engineering fees, sales tax, and a modest contingency that is included in this request. Ecology is confident that this will address all concerns and code violations noted in the engineering report.

Budget Details:

- Equipment, Construction, and Installation: \$462,000
- Engineering and DES Services: \$45,000
- Contingency (20 percent): \$101,400
- Sales Tax (8.9 percent): \$54,148
- Total: \$662,548

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Project Number: 40000467

Project Title: Failing Main Electrical Service Panel

Description

Note: Ecology uses a standard 15 percent contingency for projects of this type. Due to the extreme volatility of base construction materials, a higher contingency (20 percent) is being requested. The volatility is due to the effects of COVID -19 on the manufacturing industry and metal and lumber tariffs.

What opportunity or problem is driving this request?

The current switchgear is more than 45 years old, and replacement parts are no longer manufactured. As components have failed, Ecology has been forced to procure increasingly scarce 'used' replacement parts. The switchgear is also out of compliance with the NEC. Violations include fire protection sprinkler piping above the system, insufficient space in front of it, dedicated space for the switchgear, and a lack of proper labeling. The engineering report indicates these violations are serious in nature and should be remedied as soon as possible.

Code Violation Details:

Fire Protection Sprinkler Piping: A three -inch diameter fire protection pipe is installed approximately 28 inches from the front of the existing switchboard at approximately 84 inches above the finished floor. This is a violation of NEC 110.26 (A)(1), which requires a minimum Depth of Working Space as indicated in the engineering report; Voltage = 150VL-G and Condition 2 (live parts opposite grounded parts) requires minimum 36 inches deep working space.

Depth of Working Space: The existing electrical equipment is installed such that the required Depth of Working Space is approximately 36 inches, with only one entrance. The existing equipment is classified as Large Equipment (rated 1200A or more and is greater than 72 inches in width). This is a violation of NEC 110.26 (C)(2)(b), which requires minimum working clearances twice that required where only one entrance to the electrical working space is provided.

Dedicated Electrical Space: Hydronic heating control valves and associated piping to fin -tube radiators on the Main Floor transit the dedicated electrical space directly above the electrical equipment. This is a violation of NEC 110.26 (E)(1)(b), which prohibits foreign systems within the Dedicated Electrical Space above electrical equipment. The presence of foreign systems within the dedicated space obstructs the installation of electrical raceways. Also, the presence of pressurized water piping and other components above energized electrical equipment represents a significant risk of electric shock or fire in the event of a leak or pipe burst.

Arc Flash Hazard Labeling: The existing equipment is not adequately labeled according to NFPA 70E for Arc Flash Hazard and Personnel Protection Equipment (PPE) recommended for servicing equipment.

Facility Maintenance Backlog Plan:

This project was added to Ecology's facility maintenance backlog plan as part of the 2021-23 budget development process. Ecology intended to request this funding as part of the 2023-25 biennial budget, but due to the safety, compliance, and reliability concerns raised in the engineering report, Ecology can no longer wait for the 2023-25 biennial budget to address this facility project. This facility project is now the number one priority on our Facility Maintenance Backlog Plan.

What are the specific benefits of this project?

New main electrical switchgear at Ecology's ERO will eliminate the failures due to its age and lack of available parts. It will also bring the switchgear into compliance with current electrical codes and eliminate safety concerns. Ecology will initiate the project as soon as funding is received and anticipates it will take less than 12-18 months to complete all phases of the project.

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Project Title: Failing Main Electrical Service Panel

Description

Ecology will also be working with DES and a contracted engineering firm to analyze current and future electrical needs. The new switchgear will allow Ecology to meet both current and future needs, and will lay the foundation for future expansion of electric vehicle charging stations at ERO. Ecology may have future budget requests for that expansion work.

What are the effects of non-funding?

If this request is not funded, the main electrical switch gear at the ERO facility will continue to fail and multiple known safety and code violations will not be fixed. The system may completely fail at any time and could result in closing the ERO for weeks or months while code violations are addressed and replacement switchgear is installed. This would have negative consequences on Ecology's business operations and would compromise the safety of employees, building tenants, and visitors.

If capital funding is not provided, Ecology would have to redirect existing resources within its operating budget away from core environmental and public health work to fund these repairs. The safety concerns noted in the engineering report are serious enough that Ecology would not be able to wait for future funding options.

Why is this the best option or alternative?

There are no feasible alternatives to this request. The specific problems identified by the engineering report completed in 2021 indicate a full electrical switchgear replacement is needed, and changes to the ERO's infrastructure are Ecology's only option.

How will clients be affected and services change if this project is funded?

Funding this request will allow Ecology to continue providing services to stakeholders, including residents, businesses, and government partners. New switchgear will also address code violations and be safer for electricians to work with.

How is the proposal impacting equity in the state?

This request addresses a critical infrastructure maintenance issue to ensure the operation in the agency's Spokane office continues without interruption. The ERO is one of Ecology's four regional offices across the state, and is critical to supporting local communities in eastern Washington. This office works directly with the public and provides services and builds relationships with harder-to-reach communities.

ERO includes counties with some of the highest proportions of underserved and vulnerable populations. This includes Whitman and Adams counties, with the highest percentages of people in poverty in the state; Franklin and Adams, with the highest percentages of people of color and Hispanic/Latino population; and Adams, Franklin, and Grant counties with the highest percentages of people who speak English less than very well. ERO and the services that it offers are critical to reaching all of Washington's diverse communities, providing equitable access, and supporting environmental justice within that region of the state.

What is the agency's proposed funding strategy for the project?

Ecology is requesting State Building Construction Account funding for this work on this state owned facility. The switchgear is critical to Ecology operations, and the engineering report indicates it cannot wait until the 2023-25 biennial budget.

Are FTEs required to support this project?

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Project Title: Failing Main Electrical Service Panel

Description

N/A

How does the project support the agency and statewide results?

This project is essential to implementing the following goals in Ecology’s strategic plan:

- Goal 1: Support and engage our communities, customers, and employees.
- Goal 2: Reduce and prepare for climate impacts.
- Goal 3: Prevent and reduce toxic threats and pollution.
- Goal 4: Protect and manage our state’s waters.
- Goal 5: Protect and restore Puget Sound.

Keeping Ecology facilities in good condition is critical to providing a safe and efficient operating base for Ecology employees and the public.

This request is a high priority on Ecology’s risk register under Facility Preservation risks, and will allow Ecology to comply with Executive Order 16-06 – State Agency Enterprise Risk Management. It supports the risk management and operation support services objectives to:

- Maintain headquarters, regional, and field offices that support staff in meeting current business.
- Monitor environmental performance of facilities and engage staff in targeted improvements that contribute to the sustainability of our operations.
- Deliver shared services in an efficient and sustainable manner.

This request provides essential support to the Governor’s Results Washington Goal 5: Efficient, Effective, and Accountable Government, by ensuring Ecology facilities are safe, well -maintained, and operate efficiently.

How will the other state programs or units of government be affected if this project is funded?

Funding this request will positively impact Ecology and other agencies and government entities that work closely with us. Ecology’s ERO building provides a safe and efficient operating base for Ecology environmental programs, and provides a base of operations for spill response in eastern Washington. Maintaining this building in good condition will benefit Ecology and other governmental entities that operate in Eastern Washington.

Proviso

N/A

Location

City: Spokane

County: Spokane

Legislative District: 003

Project Type

Facility Preservation (Minor Works)

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Report Number: CBS002

Date Run: 9/7/2021 8:32AM

Project Number: 40000467

Project Title: Failing Main Electrical Service Panel

Description

Growth Management impacts
 N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2021-23 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
057-1	State Bldg Constr-State	663,000				663,000
	Total	663,000	0	0	0	663,000
Future Fiscal Periods						
		<u>2023-25</u>	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	
057-1	State Bldg Constr-State					
	Total	0	0	0	0	

Operating Impacts

No Operating Impact

Narrative

If this project is not funded, Ecology will be forced to fund it from its operating budget. If this happens, Ecology will cost allocate the project, and dedicated environmental funds will be used to replace the main electrical switchgear, negatively impacting funds available for core environmental and public health work. This may cause some concern with fee and taxpayers who support these operating budget fund sources.

21-114 ECY Switch Gear Project – Study

Final Report



Report By MW Consulting Engineers

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MW

CONSULTING ENGINEERS

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Project Coordinator | Facilities
Department

Department of Ecology
State of Washington
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May 21, 2021

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SECTION 1 – EXECUTIVE SUMMARY

The existing service switchboard should be replaced within the next 12-18 months because the equipment is beyond the anticipated useful life for electrical equipment, is obsolete and replacement parts are not readily available, and does not comply with code due to multiple latent code violations including 1) the presence of foreign systems in the working space in front of and in the dedicated space above the equipment, 2) inadequate depth of working space, and 3) lack of proper labeling for appropriate personnel protective equipment. Multiple concepts were considered and evaluated. Viable concepts were developed into the options presented herein.

SECTION 2 – INTRODUCTION

MW was contacted by Dept. of Enterprise Services (DES) regarding the replacement of existing service switchgear at the existing Ecology Building located at 4601 N Wall St, Spokane WA 99205 (*see Exhibit 2*). MW met with DES and Ecology Dept. facilities personnel onsite to discuss the existing switchgear and review their concerns and desired outcomes. Based on discussions during the meeting, it was determined that MW would perform a study to document the existing switchgear in detail and evaluate the current conditions, note any code deficiencies and safety concerns as well as provide cost estimates to replace with near switchgear.

MW reviewed existing Record Drawings depicting the electrical distribution system. MW then visited facility on four occasions (February 23, 2021, March 22, 2021, April 6, 2021, and May 14, 2021) and documented the existing conditions for the purposes this report.

In addition to itemizing latent deficiencies, this report includes specific actions to mitigate these deficiencies. Refer to **Section 3** for a detailed discussion of the existing conditions.

Refer to **Section 4** for analysis of historic electric utility data, load calculations, and recommended service equipment ratings.

Refer to **Section 5** for proposed options for switchgear replacement, technical documentation, and associated costs.

Refer to **Section 6** for a discussion of recommendations for switchgear replacement.

Throughout this report, specific terminology is used to discuss equipment, some of which is unique to the electrical industry and not widely used elsewhere, refer to **Section 7** for definitions of technical terms used throughout this report.

SECTION 3 - FINDINGS

Existing Conditions

The existing Ecology Building was constructed in the mid-1970's and is supplied from a an Avista Utilities pad mounted utility transformer (#AVE30820) located in a parking island west of the building (*see Exhibit 3.1*). This transformer is rated at 300kVA, 208Y/120V. Electric utility metering is provided by CT's mounted inside the XFMR enclosure and wired to a stanchion mounted meter base (*see Exhibit 3.2*). Avista Utilities meter [#00042105] provides net-metering (kW and kWh) for the building.

Utilization voltage is supplied from the pad mounted utility transformer to the electric service equipment through an underground service consisting of 10 Sets of 4#500 MCM (AL) – 3-1/2" C (*see Exhibit 3.3*) entering the rear of the enclosure near the top of the housekeeping curb and terminating in a service switchboard rated at 2500A and equipped with two main breakers rated 3P-2000A and 3P-1200A, respectively (*see Exhibit 3.4*). The 3P-2000A main breaker supplies a distribution switchboard rated at 2000A. This switchboard supplies miscellaneous mechanical equipment, elevators, lighting and receptacles, EV charging stations, and is the point of connection for the solar PV system (*see Exhibit 3.5*). Other than the solar PV system and the EV charging station panel, all loads in the distribution switchboard are supplied by under slab conduits enter the bottom of the enclosure. The 3P-1200A main breaker supplies a four-section motor control center rated at 1200A (*see Exhibit 3.6*). This motor control center supplies the rooftop air-conditioning units (*see Exhibit 3.7*), air handling unit supply and return fans, hydronic water circulating pumps (*see Exhibit 3.8*), etc. Existing magnetic motor starters have been bypassed or removed to facilitate supply of fan and pump motors through external variable frequency drives (*see Exhibits 3.9 through 3.11*).

In recent years, the owner has made improvements included a rooftop solar PV system rated at approximately 18.53 kW (DC) (*see Exhibit 3.12*). This PV array is connected to the building electrical system through wall mounted inverter(s) mounted in the area well west of the basement mechanical room (*see Exhibit 3.13*). The output of the PV system inverter(s) is metered by a production meter [#68004081 (#T12206780)] (*see Exhibit 3.14*). Also, an outdoor panel was added to supply EV charging stations in the parking lot west of the building (*see Exhibit 3.15*). This panel is rated at 225A and is equipped with (10) 2P-40A for EV charging stations; (6) are presently in use and (4) are spares for expansion.

Equipment Obsolescence

The existing electrical service and distribution equipment (except for the branch panel installed to supply the EV charging stations) was manufactured by ITE Imperial Corporation and appears to be from the original building construction. Siemens acquired ITE Imperial Corporation in 1983.

The existing equipment is more than 45 years old and is well beyond the anticipated useful service life of electrical distribution equipment, with routing maintenance, is approximately 30-35 years. Considering the age of the equipment, availability of spare parts is likely already quite limited and will be increasingly limited in the future.

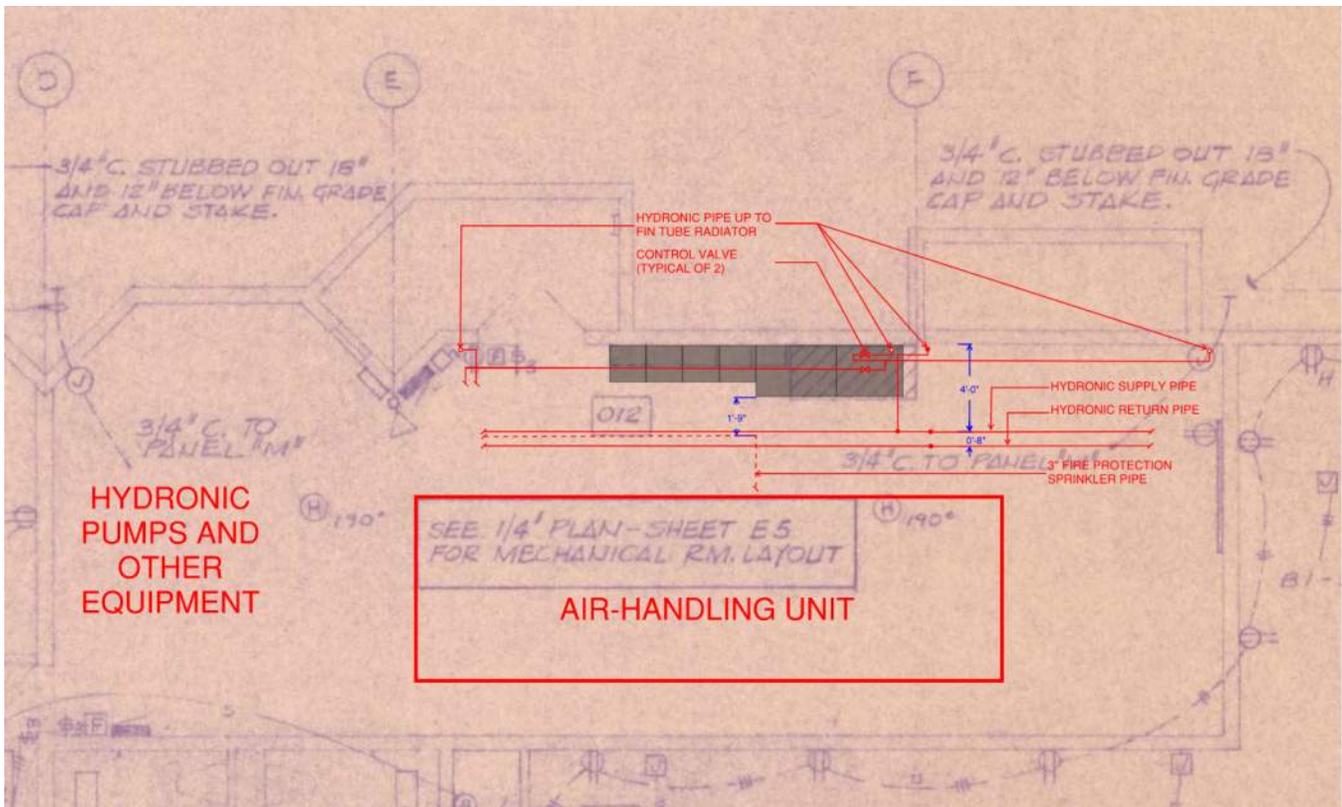
Latent Code Violations

Fire Protection Sprinkler Piping - A 3-inch diameter fire protection pipe is installed approximately 28 inches from the front of the existing switchboard at approximately 84 inches above the finished floor (*see Exhibit 3.16*). This

is a violation of NEC 110.26 (A)(1) which requires a minimum *Depth of Working Space* as indicated in Table 110.26(A)(1); Voltage = 150V_{L-G} and Condition 2 (live parts opposite grounded parts) requires minimum 36 inches deep working space.

Depth of Working Space - The existing electrical equipment is installed such that the required *Depth of Working Space* is approximately 36 inches with only one entrance (see Exhibit 3.17). The existing equipment is classified as *Large Equipment* (rated 1200A or more and is greater than 72 inches in width). This is a violation of NEC 110.26 (C)(2)(b) which requires minimum working clearances twice that required Table 110.26(A)(1) where only one entrance to the electrical working space is provided.

Dedicated Electrical Space - Hydronic heating control valves and associated piping to fin-tube radiators (see Exhibit 3.18) on the Main Floor transit the dedicated electrical space directly above the electrical equipment (see Exhibit 3.19). This is a violation of NEC 110.26 (E)(1)(b) which prohibits foreign systems within the *Dedicated Electrical Space* above electrical equipment. The presence of foreign systems within the dedicated space obstructs the installation of electrical raceways. Furthermore, the presence of pressurized water piping and other components above energized electrical equipment represents a significant risk of electric shock or fire the event of a leak or pipe burst.



Arc Flash Hazard Labeling - The existing equipment is not adequately labeled in accordance with NFPA 70E for Arc Flash Hazard and Personnel Protection Equipment (PPE) recommended for servicing equipment.

SECTION 4 – ANALYSIS

The owner provided MW utility data from July 1994 to the present. This data provided invaluable insights into the gradual reduction of electrical load in the building over a 25-year period. Monthly peak demand (kW) data was plotted in Exhibit 4. The blue line depicts the monthly peak demand (kW) and the red line depicts the 12-month average of monthly peak demand readings.

Table 4.1 summarizes relevant electrical metering data for the data set provided. This table is organized to depict the reduction in Peak Demand and Associated.

Table 4.1 – Summary of Peak Demand Data and Service Calculations

Year	Peak Demand (kW)	12-Month Average Peak Demand	Peak Apparent Power (kVA)	Peak Apparent Power with NEC 220.87 Safety Factor	12-Month Average Peak Apparent Power	Peak Demand Current (A)	Minimum Service Rating	Recommended Minimum Service Rating
Peak (all years)	540	228	600	750	317	2082	2100	2500
2001-2020	198	156	220	275	217	763	800	1200
2002-2020	162	151	180	225	209	625	700	1200
2003-2020	162	123	180	225	171	625	700	1200
2004-2020	159	123	177	221	171	613	700	1200
2005-2020	159	122	177	221	169	613	700	1200
2006-2020	159	122	177	221	169	613	700	1200
2007-2020	159	111	177	221	154	613	700	1200
2008-2020	156	111	173	217	154	601	700	1200
2009-2020	156	105	173	217	145	601	700	1200
2010-2020	153	105	170	213	145	590	600	1200
2011-2020	135	103	150	188	142	520	600	1200
2012-2020	135	94	150	188	131	520	600	1200
2013-2020	135	94	150	188	131	520	600	1200
2014-2020	135	94	150	188	131	520	600	1200
2015-2020	128	93	142	178	129	493	500	1200
2016-2020	128	91	142	178	126	493	500	1200
2017-2020	118	83	131	164	116	455	500	1200
2018-2020	118	83	131	164	116	455	500	1200
2019-2020	118	83	131	164	116	455	500	1200

Peak Demand (kW) data from the utility meter and 12-Month Average Peak Demand (kW) depict steady decline in the electrical load. Peak Apparent Power is calculated by dividing the Peak Demand (kW) by an average power factor of 0.9. When Peak Demand metering data is utilized for load calculation purposes, NEC 220.87 requires the application of a 125% Safety Factor. Assuming that the load is effectively “balanced” across all three phases, the Monthly Peak Current is calculated by dividing the Peak Apparent Power with NEC 220.87 Safety Factor by the utilization voltage of 208Y/120V.

The Minimum Service Rating was calculated by rounding the calculated Peak Demand Current to the nearest hundred amperes. Metering data from 2001 to the present suggests that the minimum service size is significantly less than the rating of existing electrical distribution system.

Finally, the Recommended Minimum Service Rating was based calculated Minimum Service Rating and the industry standard ratings established by the electrical equipment manufacturers. Although the load data would support a Minimum Service Rating as low as 600A, a Recommended Minimum Service Rating of 1200A was selected to ensure that the system will have adequate spare capacity for the anticipated life of the new electrical equipment and will accommodate the potential installation of additional EV charging stations.

SECTION 5 – OPTIONS

To develop multiple viable option for the proposed replacement of the existing equipment and remedy of the existing latent code violations, numerous concepts were considered and evaluated based upon the following criteria: 1) resolution of latent conditions, 2) physical dimensions compatible with space constraints, and 3) cost effectiveness. The following concepts did not satisfy all three criteria and were rejected:

Concepts 3A (2500A) – NEMA 1 switchboard MSB rated at 2500A with (3) 800A grouped main breakers. This switchboard will be located indoors and will supply new distribution sections. *This option was abandoned due to excess space requirements resulting from 2020 NEC 230.71 which requires grouped mains be installed in separate vertical.*

Concepts 3B (1200A) – NEMA 1 switchboard MSB rated at 1200A with (3) 800A grouped main breakers. This switchboard will be located indoors and will supply new distribution sections. *This option was abandoned due to excess space requirements resulting from 2020 NEC 230.71 which requires grouped mains be installed in separate vertical enclosures.*

Option 4A (2500A) – NEMA 3R switchboard MSB rated at 2500A with (3) 800A grouped main breakers. This switchboard will be located outdoors in the motorcycle parking space adjacent to the existing pad mounted transformer and will supply new distribution sections inside the building through a pull box. *This option was abandoned due to excess space requirements resulting from 2020 NEC 230.71 which requires grouped mains be installed in separate vertical enclosures.*

Option 4B (1200A) – NEMA 3R switchboard MSB rated at 1200A with (3) 800A grouped main breakers This switchboard will be located outdoors in the motorcycle parking space adjacent to the existing pad mounted transformer and will supply new distribution sections inside the building through a pull box. *This option was abandoned due to excess space requirements resulting from 2020 NEC 230.71 which requires grouped mains be installed in separate vertical enclosures.*

Option 6 - NEMA 1 switchboard MSB rated at 800A, 480Y/277V with main. This switchboard will be located indoors and will supply new distribution sections through a dry-type transformer located indoors. *This option was abandoned due to excessive construction costs, duration of service interruption associated with replacement of the existing utility transformer and service equipment, and long-term operational costs.*

Concepts that satisfied all three of the criteria described above were deemed to be “viable” and were further developed into the following options:

Option 1A (2500A) - NEMA 3R switchboard MSB rated at 2500A with a 3P-2500A main breaker plus (3) 3P-800A and (1) 3P-225A feeder breakers. This switchboard will be located outdoors in the motorcycle parking space adjacent to the existing pad mounted transformer and will supply new distribution sections inside the building through a pull box. Refer to Exhibit 5.1 for dimensional drawings for proposed equipment.

Option 1B (1200A) – NEMA 3R switchboard MSB rated at 1200A with a 3P-1200A main breaker plus (3) 3P-800A and (1) 3P-225A feeder breakers. This switchboard will be located outdoors in the motorcycle parking space adjacent to the existing pad mounted transformer and will supply new distribution sections inside the building through a pull box. Refer to Exhibit 5.2 for dimensional drawings for proposed equipment.

Option 2A (2500A) – NEMA 1 switchboard MSB rated at 2500A with a 3P-2500A main and multiple feeder breakers to re-feed existing loads and provide spares for future growth. This switchboard will be located indoors and will supply new distribution sections. Refer to Exhibit 5.3 for dimensional drawings for proposed equipment.

Option 2B (1200A) – NEMA 1 switchboard MSB rated at 1200A with a 3P-1200A main and multiple feeder breakers to re-feed existing loads and provide spares for future growth. This switchboard will be located indoors and will supply new distribution sections. Refer to Exhibit 5.4 for dimensional drawings for proposed equipment.

Option 5 – NEMA 3R switchboard MSB rated at 2500A with a 3P-2500A main breaker will be located outdoors adjacent to the existing pad mounted transformer and will supply new and an indoor NEMA 1 distribution switchboard rated at 2500A with (3) 800A feeder breakers. This distribution switchboard will supply distribution sections which will re-feed the existing loads. Refer to Exhibit 5.5 for dimensional drawings for proposed equipment.

All five options were based upon the assumption that equipment replacement and cutovers would be performed during unoccupied hours and that accommodations would be made for temporary power for critical loads during outages.

Each of the above options include the required mechanical scope to remedy the existing code violations described in **Section 3**. This scope consists of the relocation of the 3” fire protection sprinkler pipe from the required working space in front of the equipment and the hydronic control valves and piping from the dedicated electrical space above the electrical equipment.

SECTION 6 – RECOMMENDATIONS AND REPLACEMENT COSTS

Due to the seriousness of the latent code violations, it is recommended that the existing fire sprinkler piping and hydronic control valves and piping be relocated as soon as possible to minimize the risk of electric shock or fire.

It is highly recommended that the existing electrical service equipment be replaced within the next 12-18 months to avoid equipment failure, eliminate the latent code violation associated with depth of working space for large equipment, and to provide code-required labeling for recommended PPE.

The costs associated with the proposed options are summarized in **Exhibit 6.1**. Refer to Exhibits 6.2 through 6.6 for a breakdown of the expected costs for each option.

SECTION 7 - DEFINITIONS

Ampacity — The maximum amount of electric current a conductor or device can carry before sustaining immediate or progressive deterioration.

Ampere (A) — A unit of measure for the intensity of an electric current flowing in a circuit. One ampere is equal to a current flow of one coulomb per second.

Apparent Power - Measured in volt-amperes (VA). Apparent power is the product of the rms voltage and the rms current.

Circuit Breaker — An automatic device for stopping the flow of current in an electric circuit. To restore service, the circuit breaker must be reset (closed) after correcting the cause of the overload or failure. Circuit breakers are used in conjunction with protective relays to protect circuits from faults.

Conductor — Any material where electric current can flow freely. Conductive materials, such as metals, have a relatively low resistance. Copper and aluminum wire are the most common conductors.

Current (I) — The flow of an electric charge through a conductor. An electric current can be compared to the flow of water in a pipe. Measured in amperes.

Demand - The average value of power or related quantity over a specified period.

kVA – Kilo-volt-amperes, is a unit of apparent electrical power. 1 kilo-volt-ampere is equal to 1000 volt-ampere: 1kVA = 1000VA. kVA equals kW divided by the power factor.

kW – Kilowatt, is the unit of power. 1 kilowatt is equal to 1000 watts: 1 kW = 1000 W. kW equals kVA times power factor.

Load — Anything which consumes electrical energy, such as lights, transformers, heaters, and electric motors.

NEMA — National Electrical Manufacturers Association

Power Factor — The ratio of the actual electrical power dissipated by an AC circuit to the product of the RMS values of current and voltage. The difference between the two is caused by reactance in the circuit and represents power that does no useful work.

Service — The conductors and equipment used to deliver energy from the electrical supply system to the system being served.

Volt (V) — A unit measure of voltage. One volt is equal to the difference of potential that would drive one ampere of current against one ohm resistance.

Voltage — An electromotive force or "pressure" that causes electrons to flow and can be compared to water pressure which causes water to flow in a pipe. Measured in volts.

WA Department of Ecology

4601 N Monroe St

N Madison St

N Monroe St

WA Department of Ecology



200 ft

Google Earth

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Exhibit 3.1 – Avista Utilities XFMR AVE30820



Exhibit 3.4 – Existing Switchboard Mains



Exhibit 3.2 – Avista Utilities Meter #00042105



Exhibit 3.3 – Service Entrance Conductors at Existing Switchboard



Exhibit 3.5 – Existing Switchboard Distribution Sections



Exhibit 3.6 – Existing Motor Control Center



Exhibit 3.7 – Existing Rooftop Chillers



Exhibit 3.8 – Existing Motor Control Center



Exhibit 3.9 – Existing AHU Fan Motor VFD



Exhibit 3.10 – Existing AHU Fan Motor VFD



Exhibit 3.11 – Existing Heating Water Pump Motor VFD



Exhibit 3.12 – Rooftop Solar PV Array



Exhibit 3.14 – Rooftop Solar PV Production Meter



Exhibit 3.13 – Rooftop Solar PV Inverters



Exhibit 3.15 – EV Charging Station Panel



Exhibit 3.16 – Fire Protection Sprinkler Pipe in Working Space



Exhibit 3.17 – Depth of Working Space at Large Equipment



Exhibit 3.18 – Fin Tube Radiator in Main Floor Office



Exhibit 3.19 – Hydronic Piping in Dedicated Space

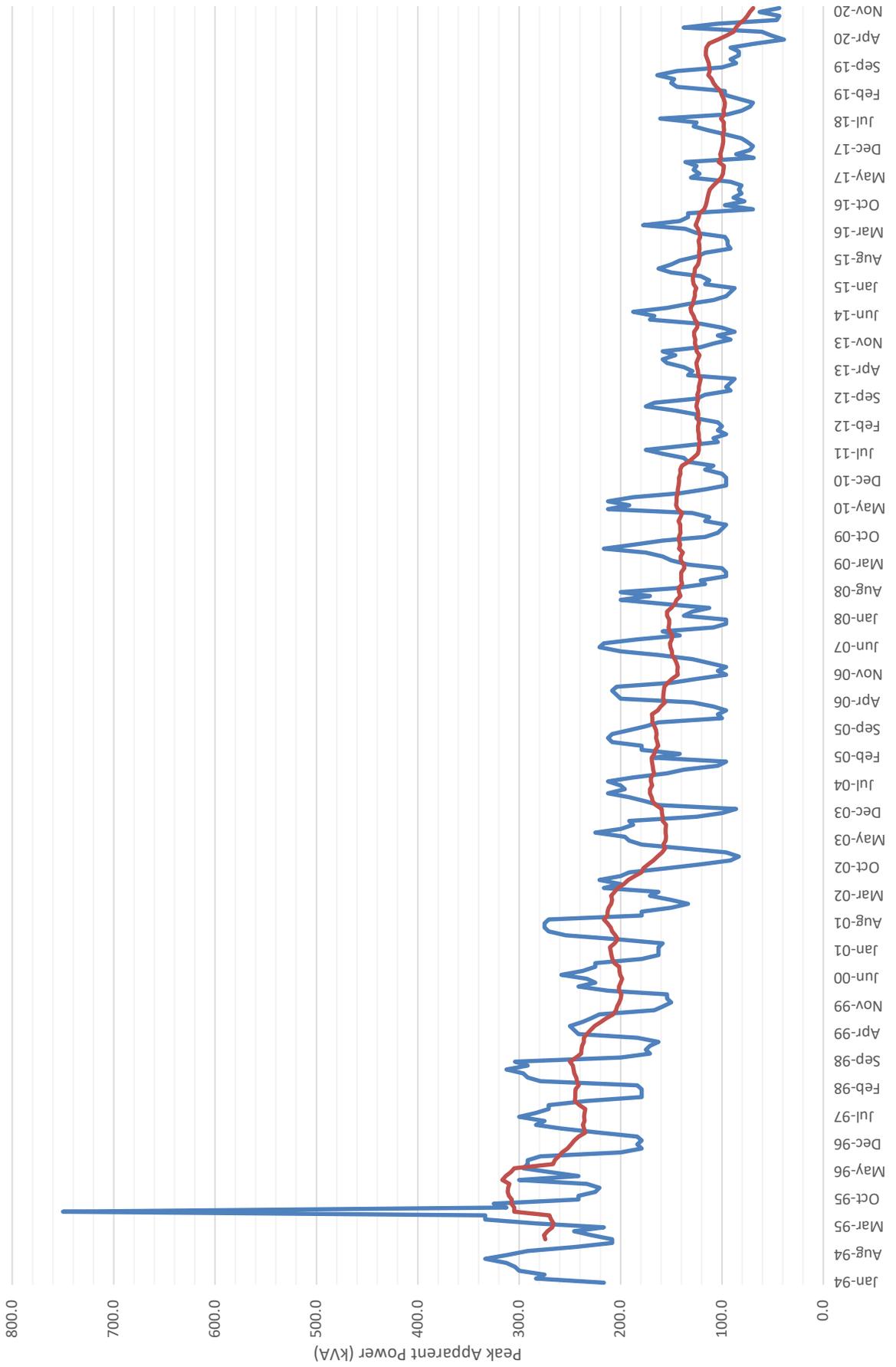


Exhibit 3.20 – Hydronic Valves and Piping in Dedicated Space



Exhibit 3.21 – Hydronic Piping in Dedicated Space

Monthly Peak Apparent Power (kVA) History @ 0.9 PF
plus 25% Safety Factor per NEC 220.87



REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data
 208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 2 Cable Through the Bottom Right of Lineup

T-bus
19.5 in

Bus System Data
 2500A Tin/Aluminum & Silver/Copper Main Bus
 (4) .25x2.00 IN/6x51 mm Cu Bus Bar Per Phase
 (3) .25x4.50 IN/6x114 mm Al Bus Bar Per Neutral
 (1) .25x2.0 IN/6x51 mm Al Ground Bus

Enclosure Data
 Type 3R Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers
 Rodent barriers
 1.5H Corrosion Resist Base Channels

Estimated Shipping Weight
 Shipping Split 1 1025.00 lbs / 464.94 kgs
 Shipping Split 2 1022.00 lbs / 463.58 kgs
 Complete Lineup 2047.00 lbs / 928.52 kgs

Code Standards
 U.L. Deadfront and suitable for use as Service Entrance when not more than six (6) disconnecting means are provided.

Rating Nameplates
 ST1– Deadfront – Section Bus 2500A
 ST2– Service Entrance – Section Bus 2500A

PRODUCT INFORMATION

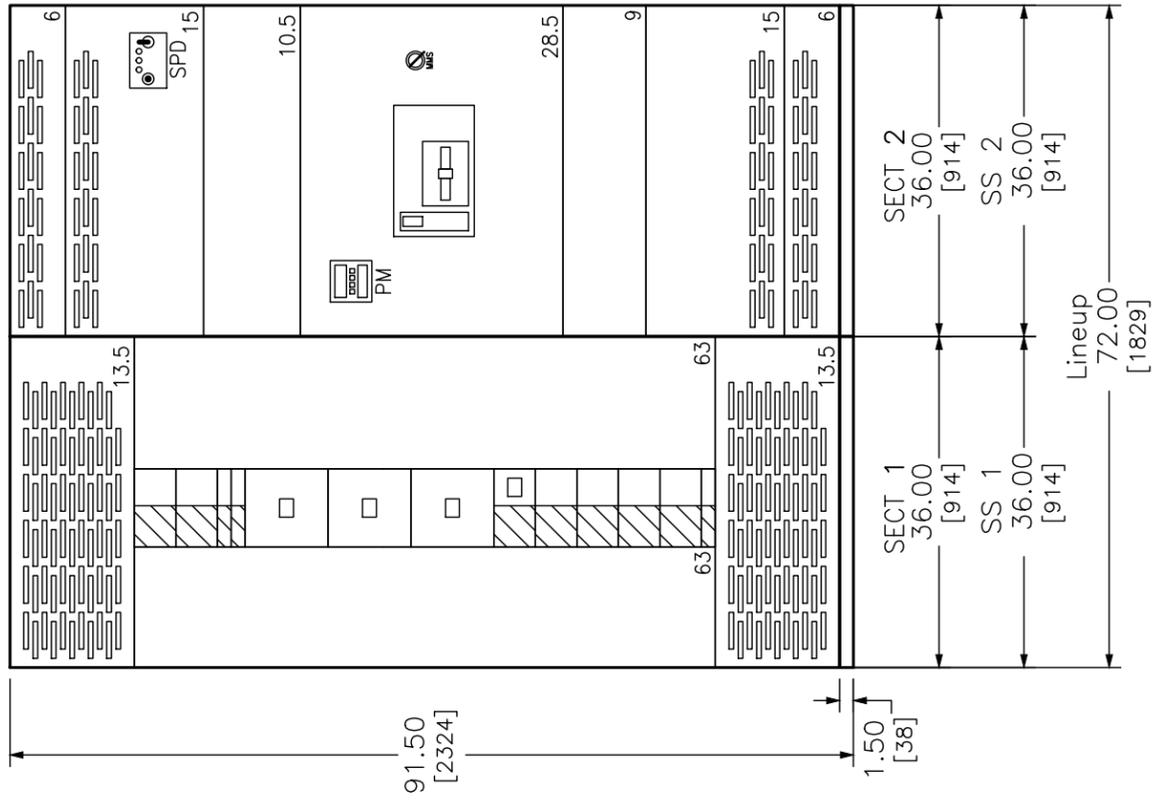
Wiring
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Instruction Bulletins
 Reference 80043–055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

Product Accessories/Options

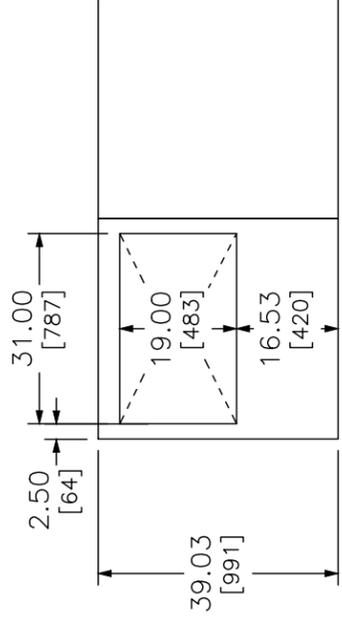
24V Trip Unit Display Power
 Locally Mounted MMS Switch

DUAL DIMENSIONS: INCHES
 MILLIMETERS

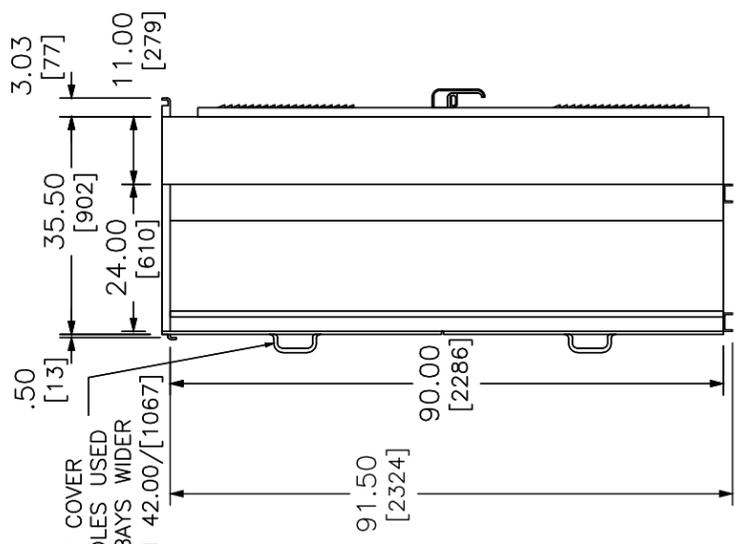


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JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	GENERAL NOTES
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68129378-01
		PG 1	OF 2
			REV -

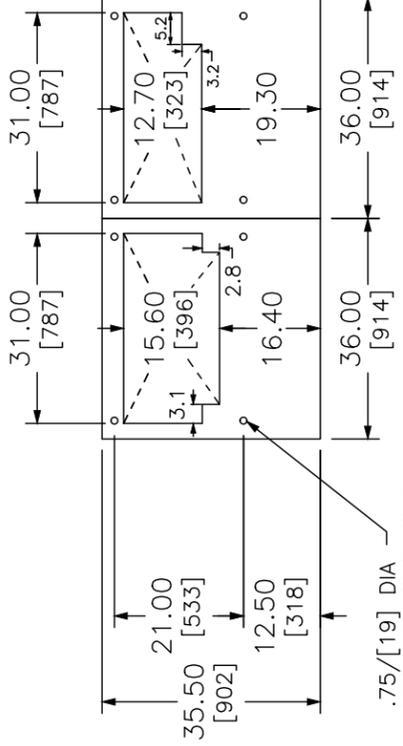
REV	DESCRIPTION	BY	DATE	---	---	---	---	---	---
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TOP VIEW -- FRONT



LEFT SIDE VIEW



FLOOR PLAN -- FRONT

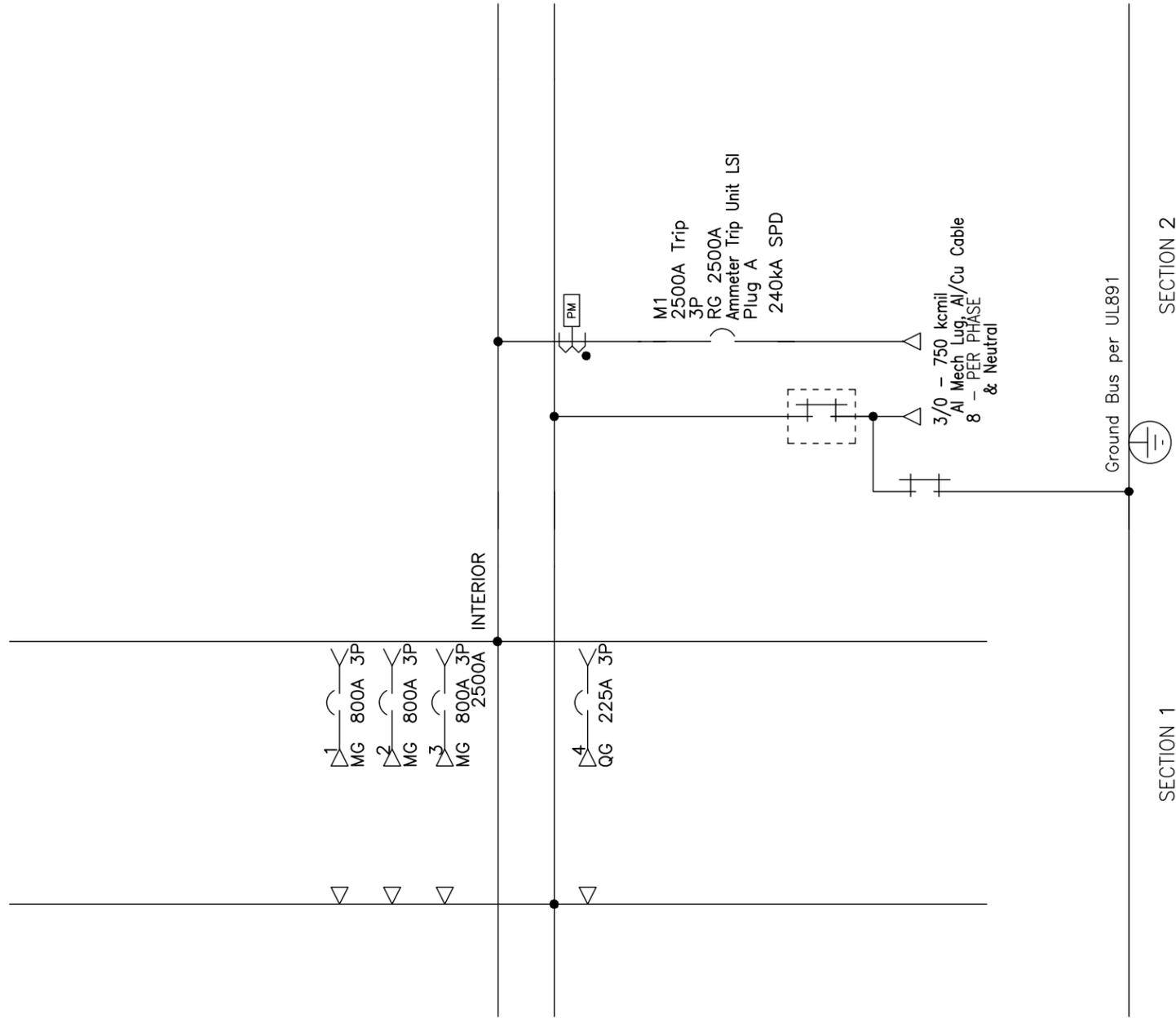
NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

JOB NAME: MW BUDGETS		EQUIPMENT DESIGNATION: OPT 1A- 2500A
JOB LOCATION: (Q2C)		EQUIPMENT TYPE: QED-2 Switchboard
DRAWN BY: (Q2C)		DRAWING TYPE: SIDE, TOP VIEW & FLOOR PLAN
ENGR:		SQUARE D By Schneider Electric
DATE: April 23 2021		DWG# FQ-2483375-68129378-01
DRAWING STATUS: QUOTE		PG 2 OF 2
		REV -

NOTE:
A MINIMUM OF 2.00/[51] CLEARANCE BEHIND THE SWITCHBOARD IS REQUIRED FOR TOP COVER OVERHANG.

DUAL DIMENSIONS: INCHES
MILLIMETERS

REV	DESCRIPTION	BY	DATE						
-									



JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 1A- 2500A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68129378-01
		PG	1 OF 2
		REV	2



By Schneider Electric

REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data
 208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 2 Cable Through the Bottom Right of Lineup

T-bus
19.5 in

Bus System Data
 1200A Tin/Aluminum & Silver/Copper Main Bus
 (2) .25x2.00 IN/6x51 mm Al Bus Bar Per Phase
 (2) .25x3.38 IN/6x81 mm Al Bus Bar Per Neutral
 (1) .25x2.0 IN/6x51 mm Al Ground Bus

Enclosure Data
 Type 3R Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers
 Rodent barriers
 1.5H Corrosion Resist Base Channels

Estimated Shipping Weight
 Shipping Split 1 952.00 lbs / 431.83 kgs
 Shipping Split 2 802.00 lbs / 363.79 kgs
 Complete Lineup 1754.00 lbs / 795.61 kgs

Code Standards
 U.L. Deadfront and suitable for use as Service Entrance when not more than six (6) disconnecting means are provided.

Rating Nameplates
 ST1– Deadfront – Section Bus 1200A
 ST2– Service Entrance – Section Bus 1200A

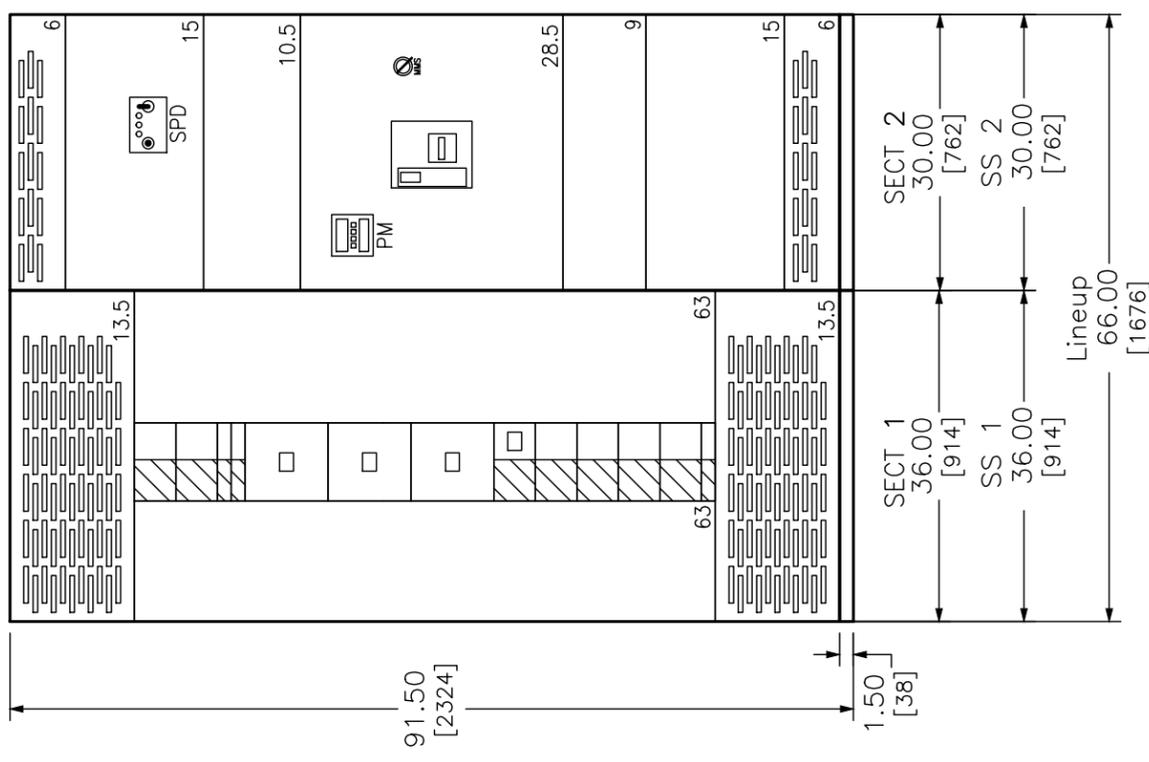
PRODUCT INFORMATION

Wiring
 All wiring to be Machine Tool Wire type

Instruction Bulletins
 Reference 80043–055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

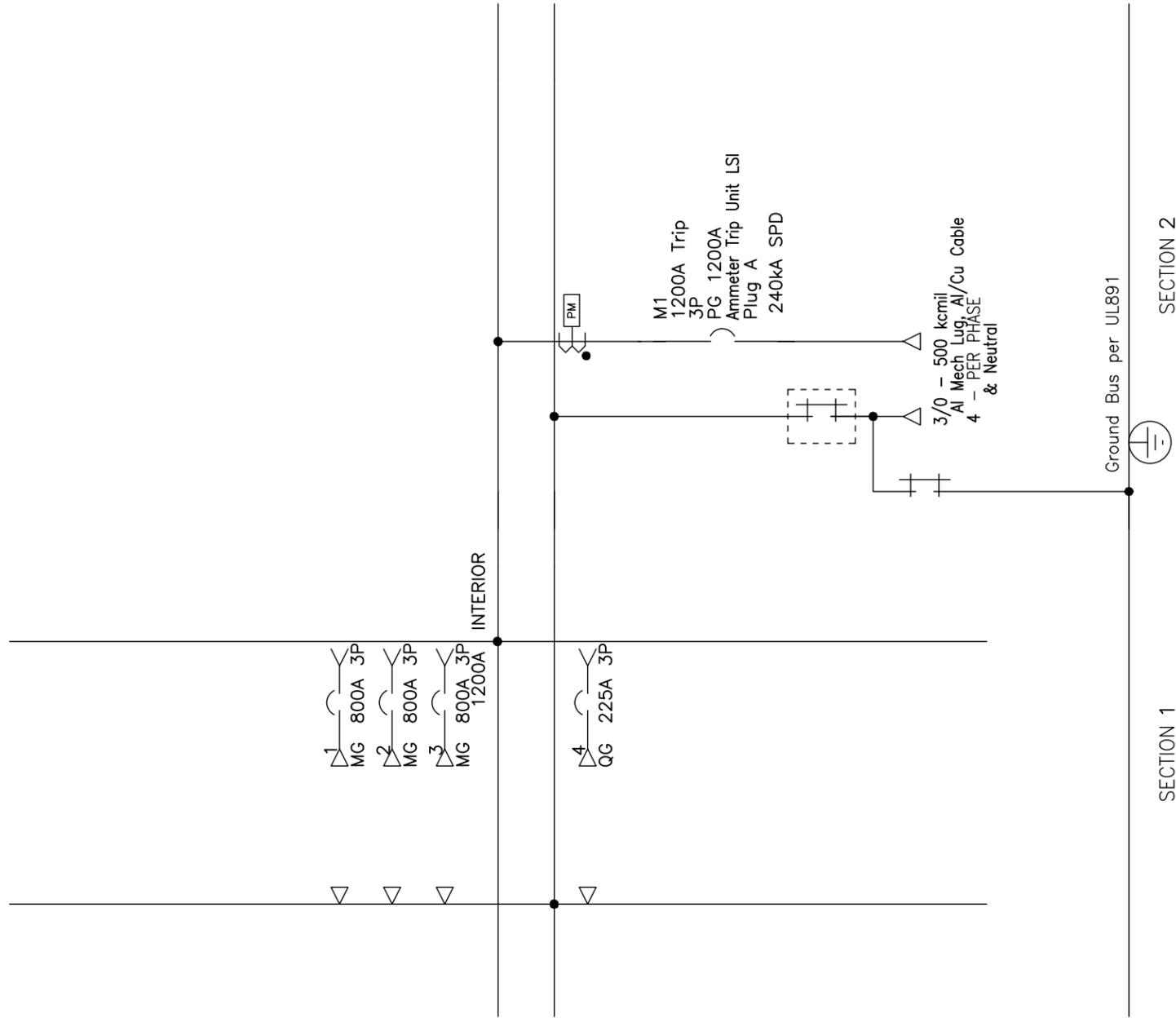
Product Accessories/Options
 24V Trip Unit Display Power
 Locally Mounted MMS Switch

DUAL DIMENSIONS: INCHES
 MILLIMETERS



JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 1B– 1200A
JOB LOCATION:		EQUIPMENT TYPE:	QED–2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	GENERAL NOTES
ENGR:			SQUARE D By Schneider Electric
DATE:	April 23 2021	DWG#	FQ–2483375–68133628–01
DRAWING STATUS:	QUOTE	PG 1	OF 2
		REV	–

REV	DESCRIPTION	BY	DATE						
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JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 1B- 1200A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68133628-01
		PG	1 OF 2
		REV	2

REV	DESCRIPTION	BY	DATE
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data
 208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 2 Cable Through the Bottom Right of Lineup

T-bus
19.5 in

T-bus
19.5 in

Bus System Data
 2500A Tin/Aluminum & Silver/Copper Main Bus
 (4) .25x2.00 IN/6x51 mm Cu Bus Bar Per Phase
 (3) .25x4.50 IN/6x114 mm Al Bus Bar Per Neutral
 (1) .25x2.0 IN/6x51 mm Al Ground Bus

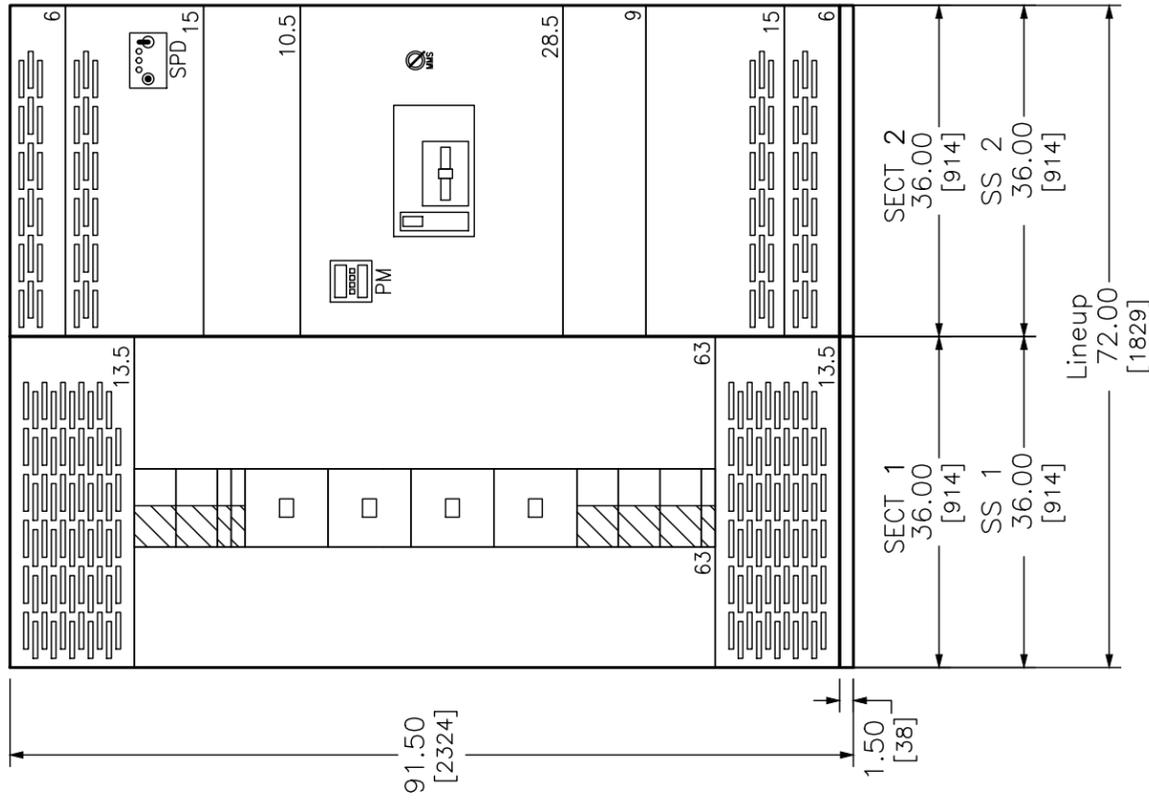
Enclosure Data
 Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies
 1.5H Corrosion Resist Base Channels

Estimated Shipping Weight
 Shipping Split 1 940.00 lbs / 426.38 kgs
 Shipping Split 2 902.00 lbs / 409.15 kgs
 Complete Lineup 1842.00 lbs / 835.53 kgs

Code Standards
 U.L. Deadfront and suitable for use as Service Entrance when not more than six (6) disconnecting means are provided.

Rating Nameplates
 ST1– Deadfront – Section Bus 2500A
 ST2– Service Entrance – Section Bus 2500A

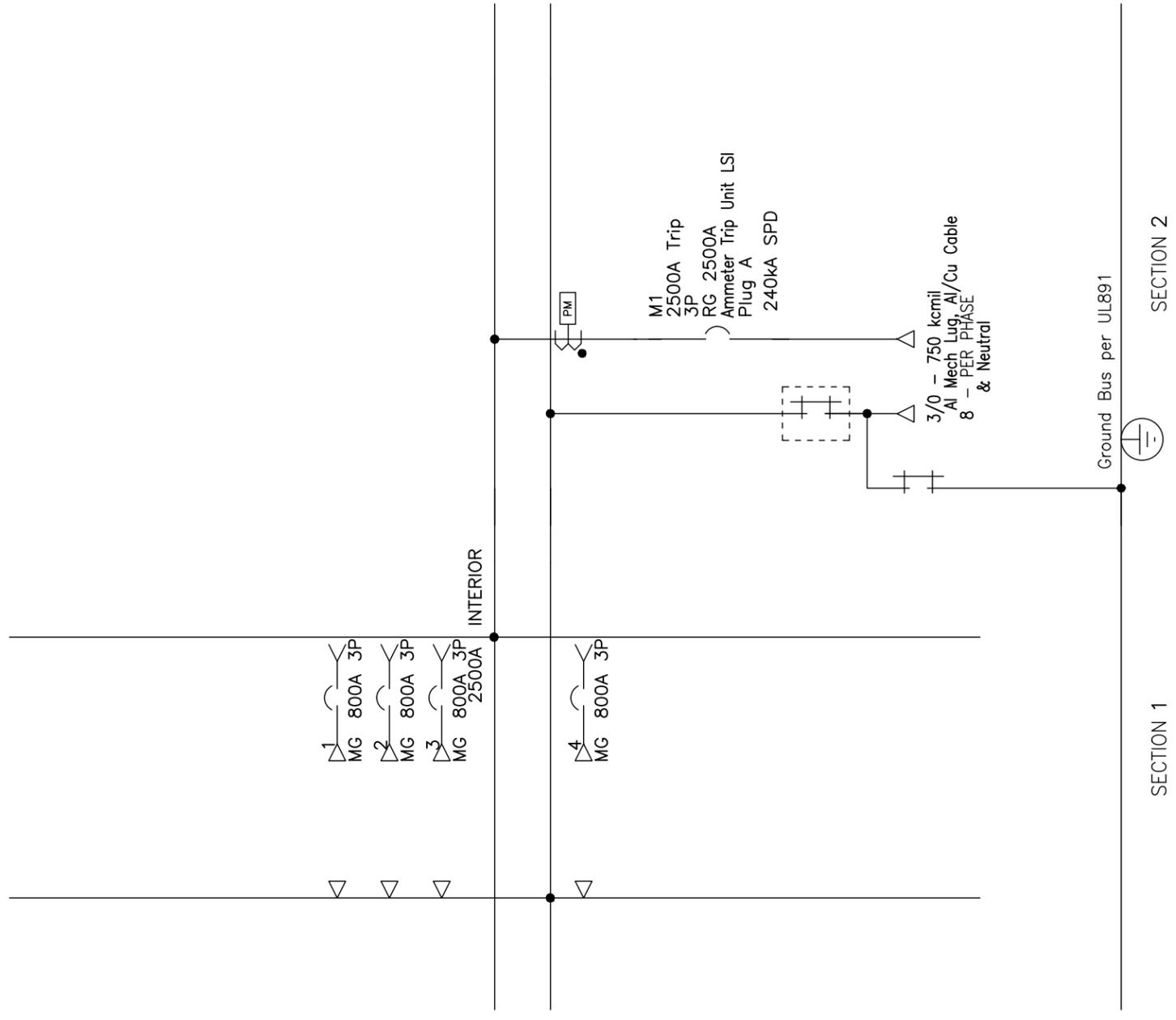
PRODUCT INFORMATION
Wiring
 All wiring to be Machine Tool Wire type
Instruction Bulletins
 Reference 80043–055 For Handling, Installation, Anchoring, Inspection And Maintenance Information
Product Accessories/Options
 24V Trip Unit Display Power
 Locally Mounted MMS Switch



DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 2A- 2500A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	GENERAL NOTES
ENGR:			SQUARE D By Schneider Electric
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68133138-01
		PG 1	OF 2
		REV	---

REV	DESCRIPTION	BY	DATE						
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JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 2A- 2500A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68133138-01
		PG	1 OF 2
		REV	2

REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data
 208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 2 Cable Through the Bottom Right of Lineup

T-bus
19.5 in

Bus System Data
 1200A Tin/Aluminum & Silver/Copper Main Bus
 (2) .25x2.00 IN/6x51 mm Al Bus Bar Per Phase
 (2) .25x3.38 IN/6x81 mm Al Bus Bar Per Neutral
 (1) .25x2.0 IN/6x51 mm Al Ground Bus

Enclosure Data
 Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies
 1.5H Corrosion Resist Base Channels

Estimated Shipping Weight
 Shipping Split 1 867.00 lbs / 393.27 kgs
 Shipping Split 2 693.00 lbs / 314.34 kgs
 Complete Lineup 1560.00 lbs / 707.62 kgs

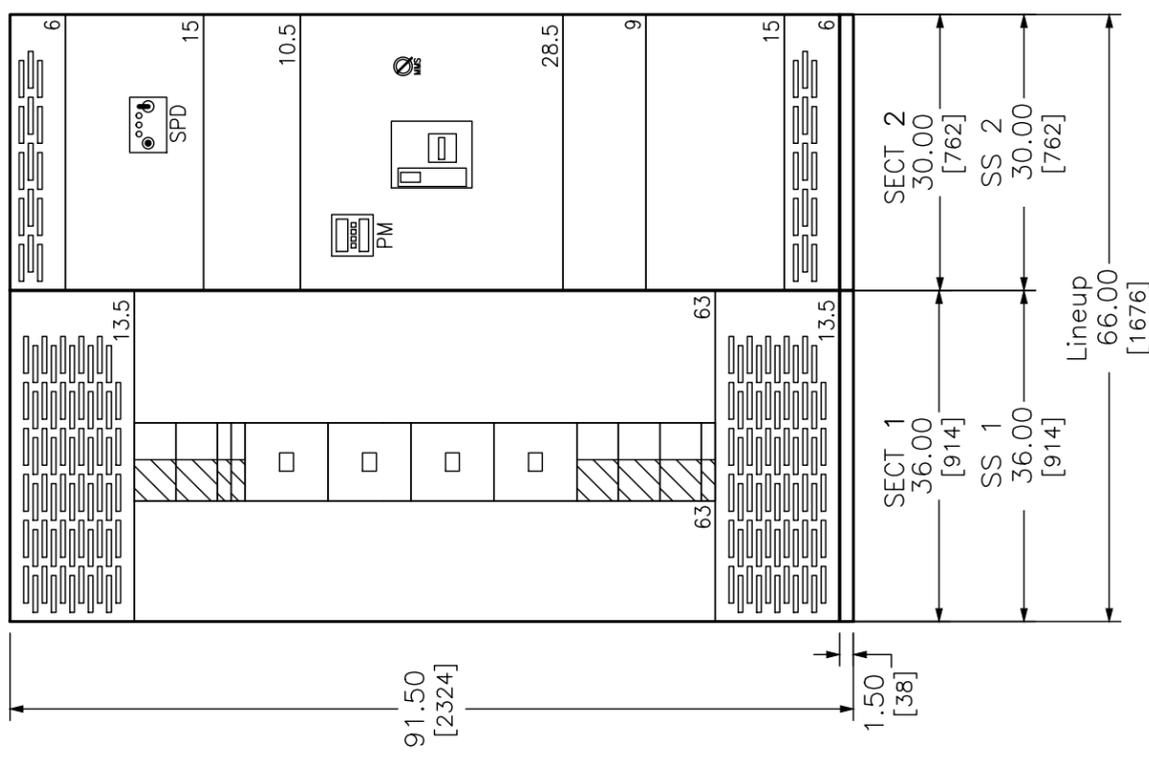
Code Standards
 U.L. Deadfront and suitable for use as Service Entrance when not more than six (6) disconnecting means are provided.

Rating Nameplates
 ST1– Deadfront – Section Bus 1200A
 ST2– Service Entrance – Section Bus 1200A

PRODUCT INFORMATION
Wiring
 All wiring to be Machine Tool Wire type
Instruction Bulletins
 Reference 80043–055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

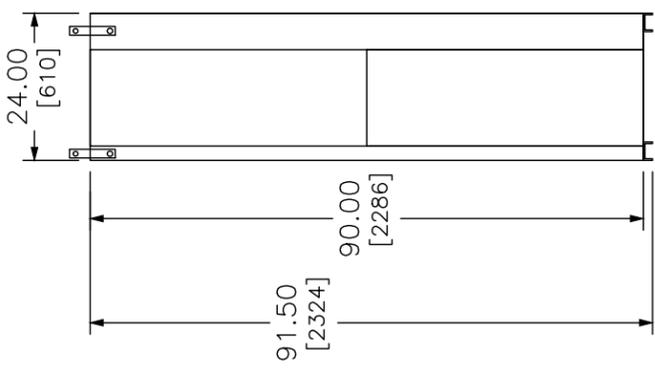
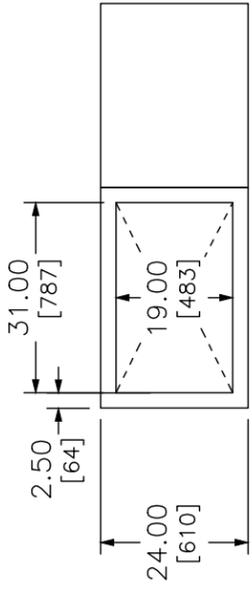
Product Accessories/Options
 24V Trip Unit Display Power
 Locally Mounted MMS Switch

DUAL DIMENSIONS: INCHES
MILLIMETERS



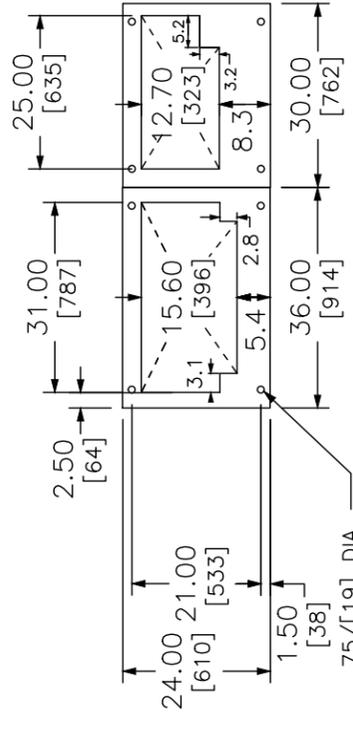
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ENGR:			SQUARE D By Schneider Electric
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ–2483375–68133764–01
		PG 1	OF 2
		REV	–

REV	DESCRIPTION	BY	DATE						
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TOP VIEW -- FRONT

LEFT SIDE VIEW



FLOOR PLAN -- FRONT

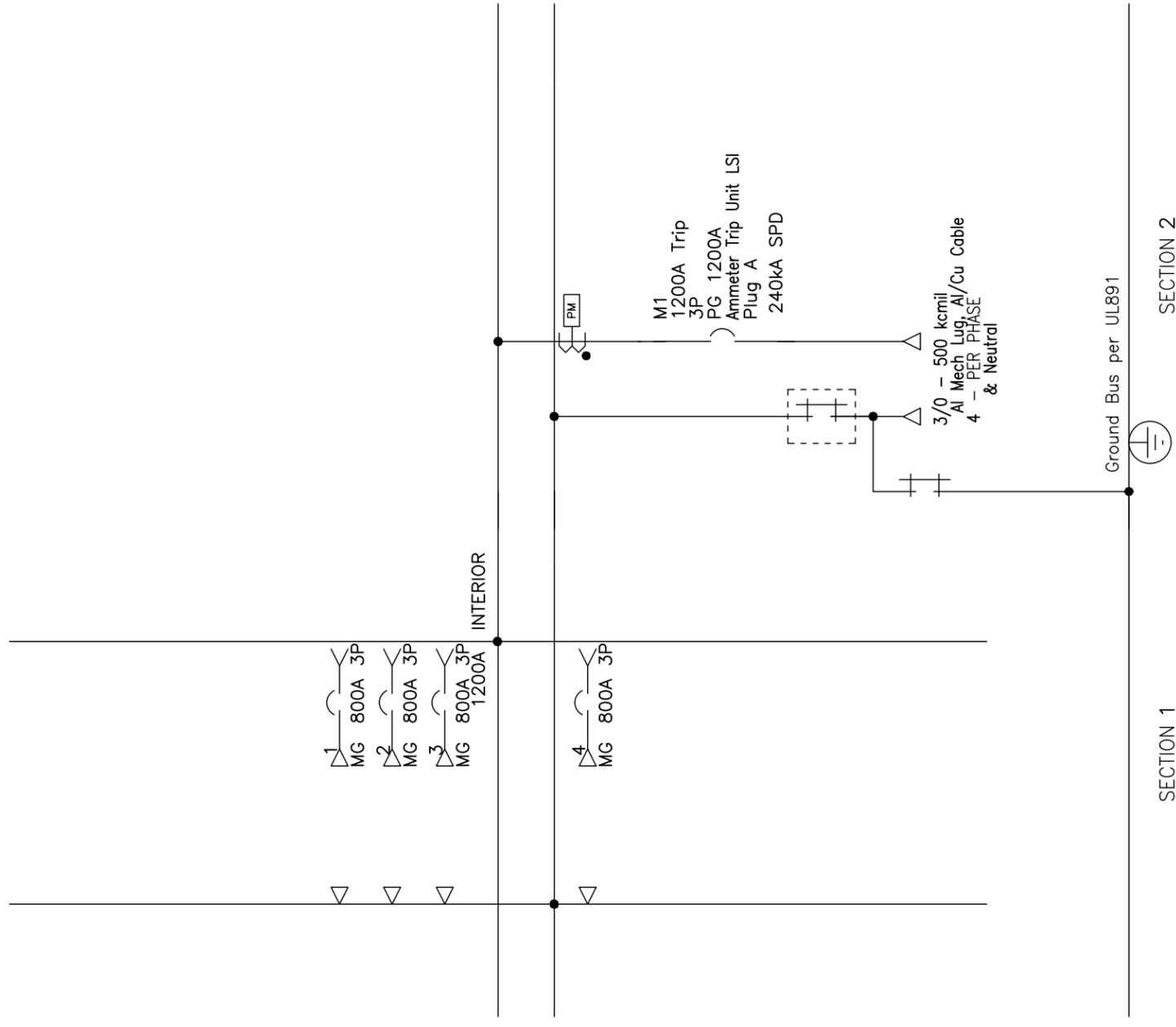
NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 2B- 1200A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	ENGR:	DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68133764-01
		PG	2 OF 2
		REV	---



REV	DESCRIPTION	BY	DATE						
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JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	OPT 2B- 1200A
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68133764-01
		PG	1 OF 2
		REV	2

REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES
PRODUCT DESCRIPTION & RATINGS

Power System Data

208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Through the Not Required of Unbussed Pull Section 1
 Incoming Section 2 Cable Through the Bottom Left of Lineup

No T-bus No T-bus

Bus System Data

2500A Tin/Aluminum & Silver/Copper Single Section with No Main Bus
 (1) .25x2.0 IN/6x51 mm Al Ground Bus

Enclosure Data

Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies

Estimated Shipping Weight

Shipping Split 1 520.00 lbs / 235.87 kgs
 Shipping Split 2 1022.00 lbs / 463.58 kgs
 Complete Lineup 1542.00 lbs / 699.45 kgs

Code Standards

U.L. Deadfront and suitable for use as Service Entrance when not more than six (6) disconnecting means are provided.

Rating Nameplates

ST1 – SWBD enclosure
 ST2 – Service Entrance – Section Bus 2500A

PRODUCT INFORMATION

Wiring

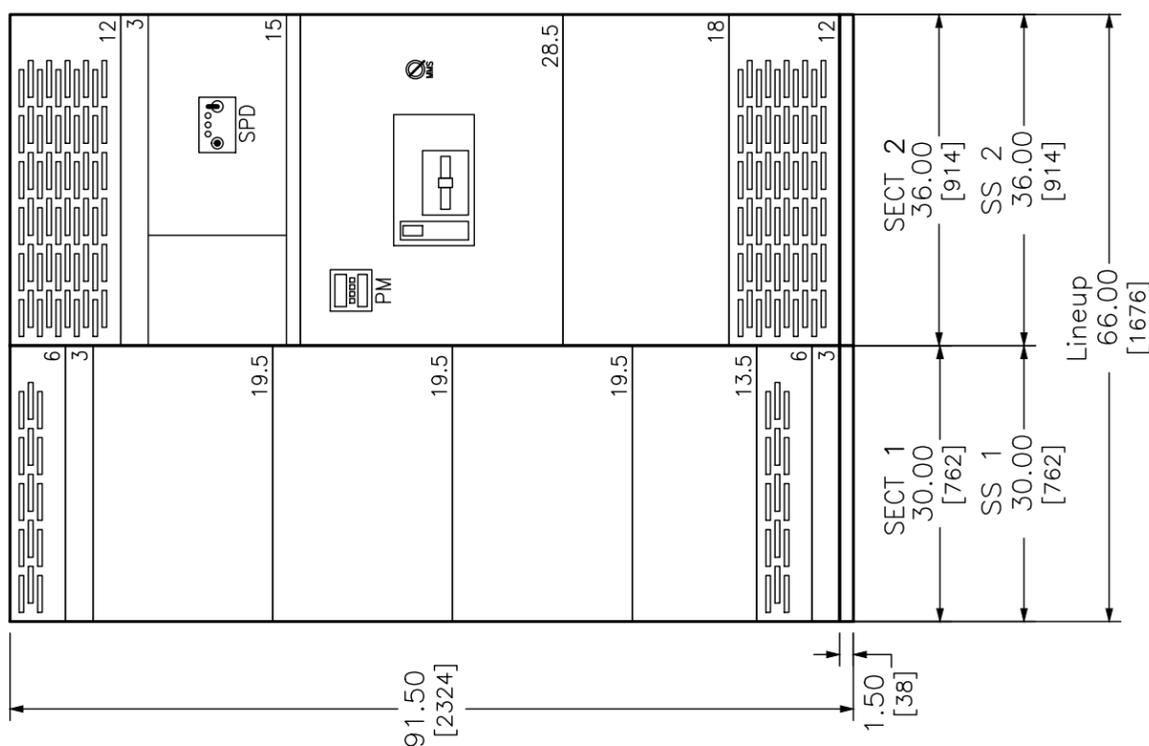
All wiring to be Machine Tool Wire type

Instruction Bulletins

Reference 80043-055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

Product Accessories/Options

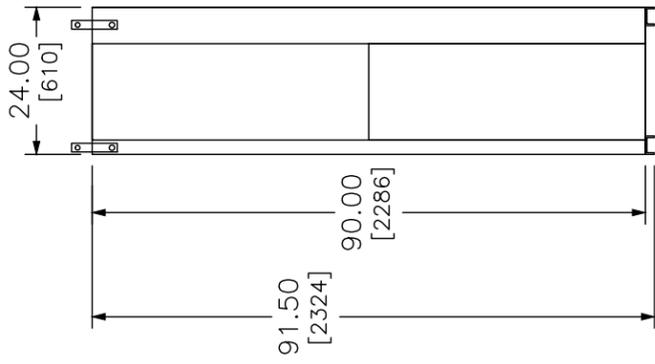
24V Trip Unit Display Power
 Locally Mounted MMS Switch



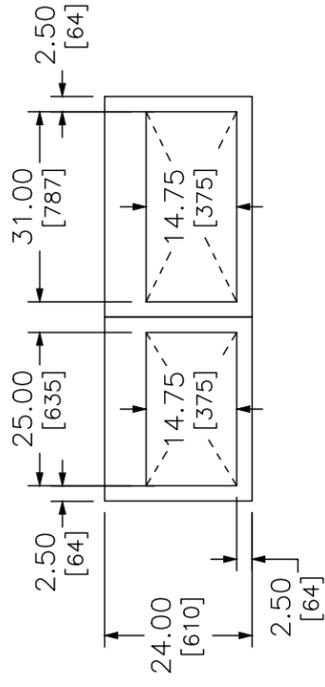
DUAL DIMENSIONS: INCHES MILLIMETERS

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JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	GENERAL NOTES
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68137607-01
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		REV	---

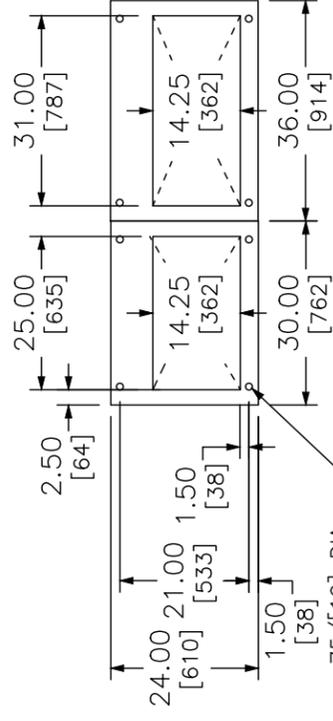
REV	DESCRIPTION	BY	DATE						
-									



LEFT SIDE VIEW



TOP VIEW -- FRONT



FLOOR PLAN -- FRONT

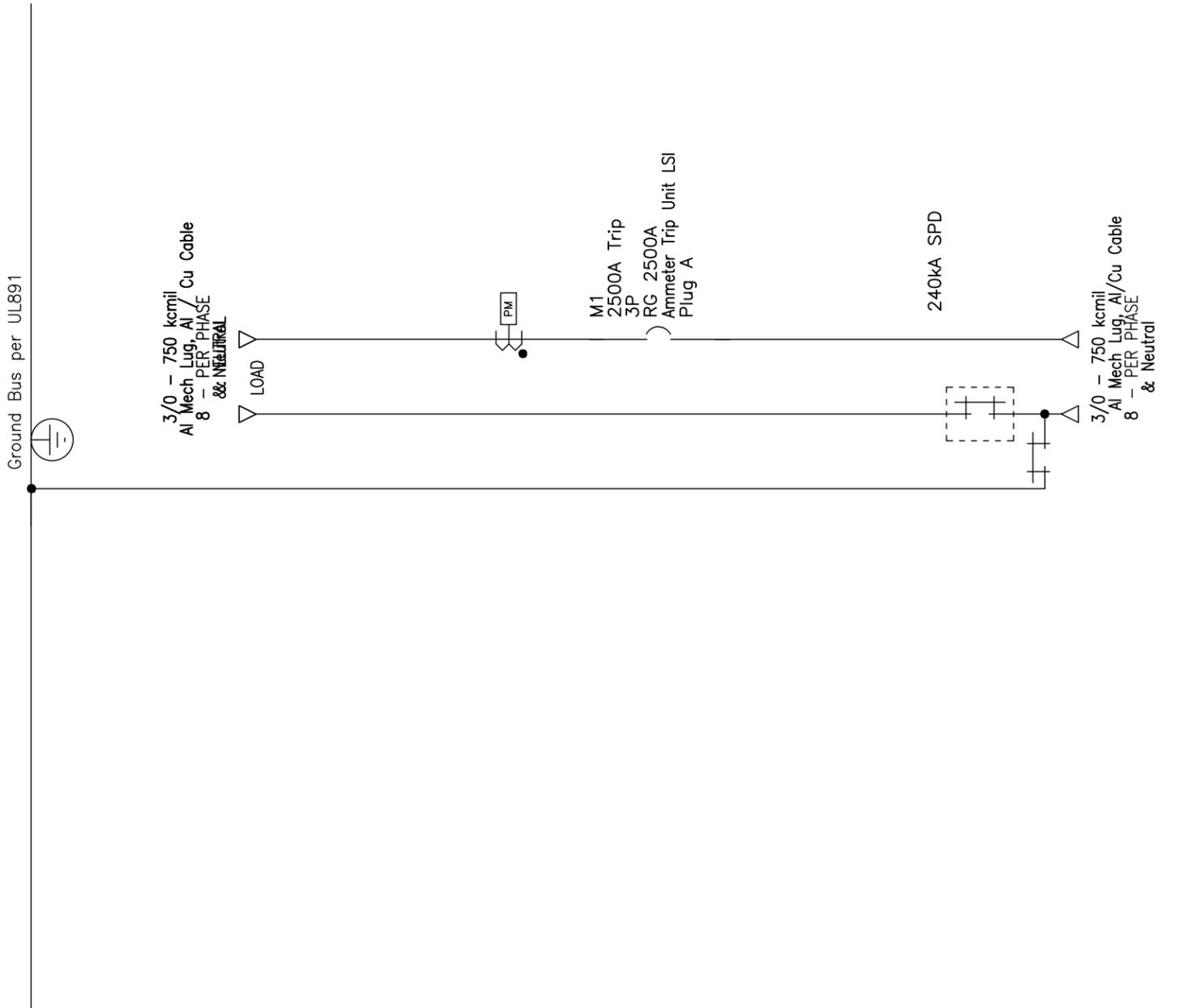
NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS
JOB LOCATION:	
DRAWN BY:	(Q2C)
ENGR:	
DATE:	April 23 2021
DRAWING STATUS:	QUOTE
EQUIPMENT DESIGNATION:	PLAN C- 2500A MAIN
EQUIPMENT TYPE:	QED-2 Switchboard
DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
DWG#	FQ-2483375-68137607-01
PG	2 OF 2
REV	



REV	DESCRIPTION	BY	DATE	---	---	---	---	---	---
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SECTION 1

SECTION 2

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	PLAN C- 2500A MAIN
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 23 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68137607-01
			PG 1 OF 2
			REV -



REV	DESCRIPTION	BY	DATE	---	---	---	---
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SWITCHBOARD GENERAL NOTES - SERIES 2

PRODUCT DESCRIPTION & RATINGS

Power System Data

208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 1 Cable Through the Top Left of Lineup

T-bus
19.5 in

T-bus
19.5 in

Bus System Data

- 2500A Tin/Aluminum & Silver/Copper Main Bus
- (4) .25x2.00 IN/6x51 mm Cu Bus Bar Per Phase
- (3) .25x4.50 IN/6x114 mm Al Bus Bar Per Neutral
- (1) .25x2.0 IN/6x51 mm Al Ground Bus

Enclosure Data

Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies

Estimated Shipping Weight

Shipping Split 1 520.00 lbs / 235.87 kgs
 Shipping Split 2 940.00 lbs / 426.38 kgs
 Complete Lineup 1460.00 lbs / 662.26 kgs

Code Standards

U.L. Deadfront

Rating Nameplates

ST1- Deadfront - Section Bus 2500A
 ST2- Deadfront - Section Bus 2500A

PRODUCT INFORMATION

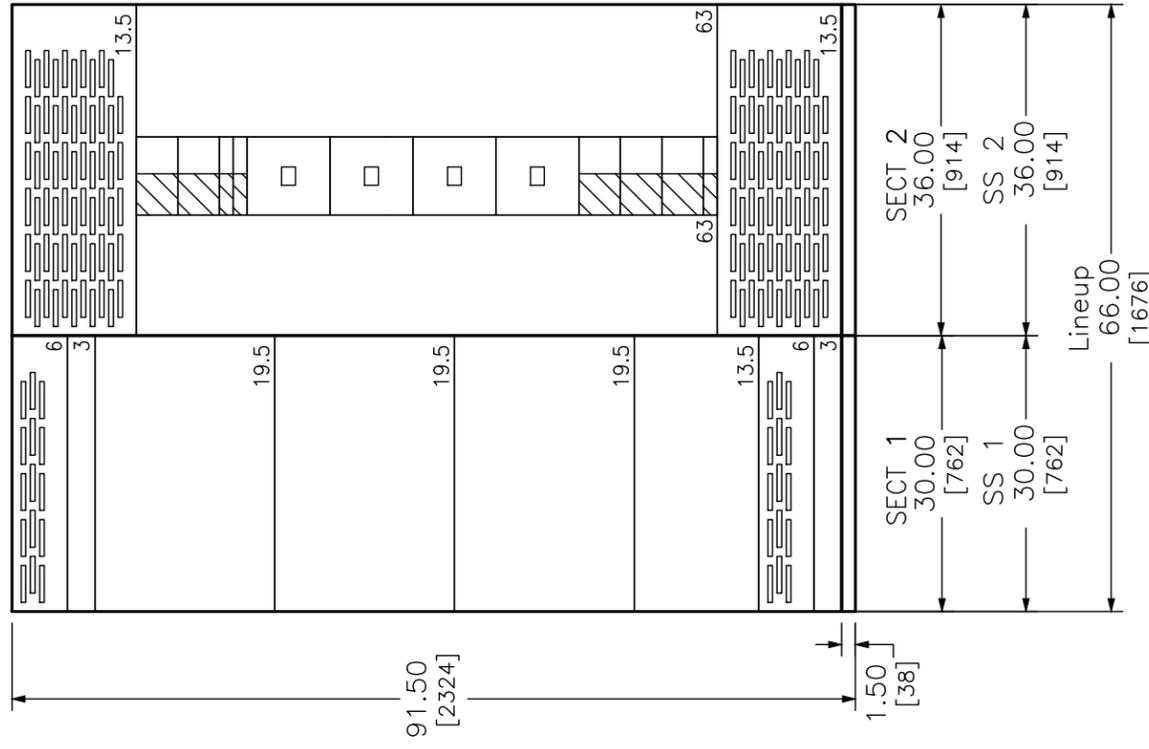
Wiring

All wiring to be Machine Tool Wire type

Instruction Bulletins

Reference 80043-055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

Product Accessories/Options

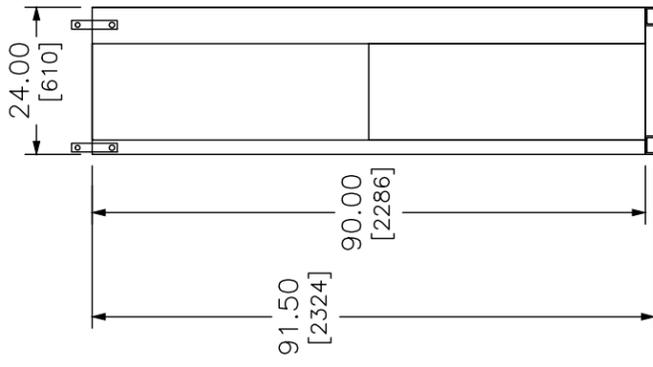


DUAL DIMENSIONS: INCHES
MILLIMETERS

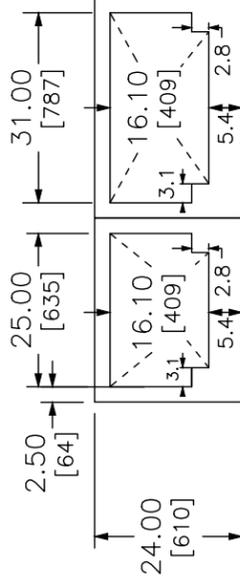
JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	PLAN C- 2500A DIST(2SECT)
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	GENERAL NOTES
ENGR:			
DATE:	April 30 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68606651-01
		PG 1	OF 2
		REV	2



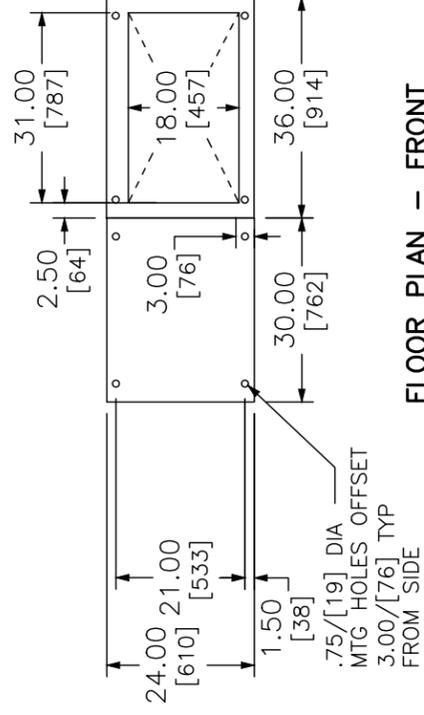
REV	DESCRIPTION	BY	DATE						
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LEFT SIDE VIEW



TOP VIEW -- FRONT



FLOOR PLAN -- FRONT

NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

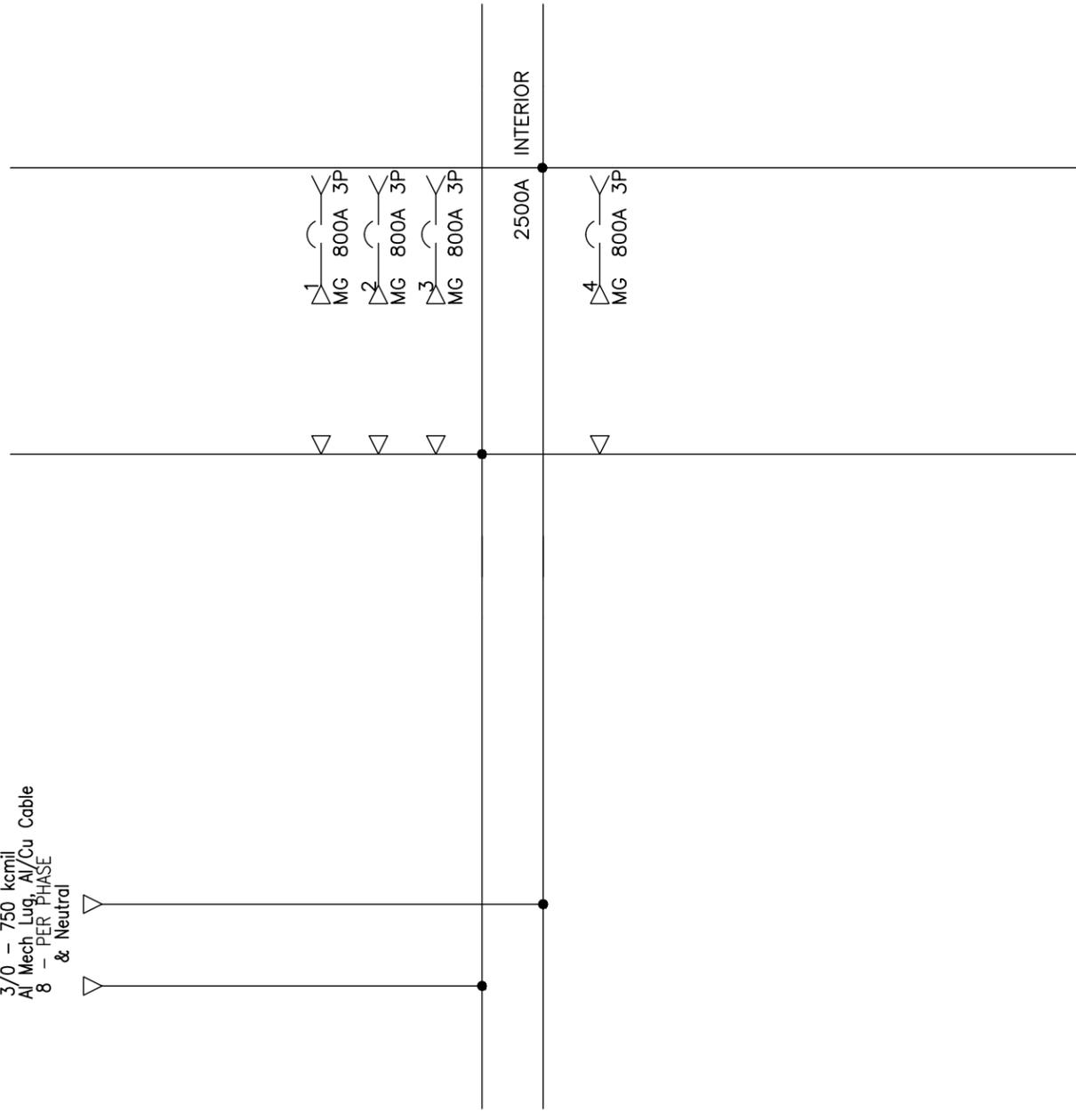
DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS
JOB LOCATION:	QED-2 Switchboard
DRAWN BY:	(Q2C)
ENGR:	
DATE:	April 30 2021
DRAWING STATUS:	QUOTE
EQUIPMENT DESIGNATION:	PLAN C- 2500A DIST(2SECT)
EQUIPMENT TYPE:	QED-2 Switchboard
DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
DWG#	FQ-2483375-68606651-01
PG	2 OF 2
REV	2



REV	DESCRIPTION	BY	DATE						
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3/0 - 750 kcmil
Al Mech Lug, Al/Cu Cable
8 - PER PHASE
& Neutral



SECTION 1

SECTION 2

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	PLAN C- 2500A DIST(2SECT)
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 30 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68606651-01



REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data

208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 1 Cable Through the Bottom Left of Lineup

T–bus
19.5 in

T–bus
19.5 in

Bus System Data

- 800A Tin/Aluminum & Silver/Copper Main Bus
- (2) .25x2.00 IN/6x51 mm Al Bus Bar Per Phase
- (1) .25x4.50 IN/6x114 mm Al Bus Bar Per Neutral
- (1) .25x1.50 IN/6x38 mm Al Ground Bus

Enclosure Data

Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies

Estimated Shipping Weight

Shipping Split 1 433.00 lbs / 196.41 kgs
 Shipping Split 2 869.00 lbs / 394.18 kgs
 Complete Lineup 1302.00 lbs / 590.59 kgs

Code Standards

U.L. Deadfront

Rating Nameplates

- ST1– Deadfront – Section Bus 800A
- ST2– Deadfront – Section Bus 800A

PRODUCT INFORMATION

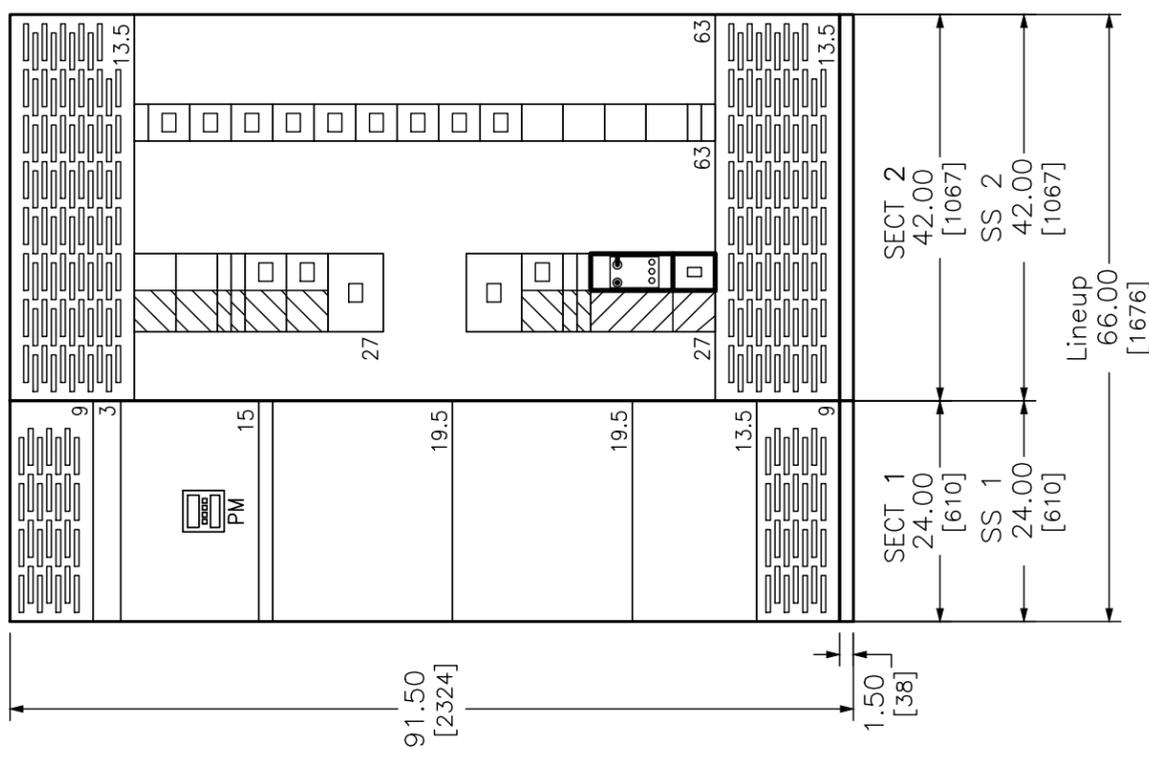
Wiring

All wiring to be Machine Tool Wire type

Instruction Bulletins

Reference 80043–055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

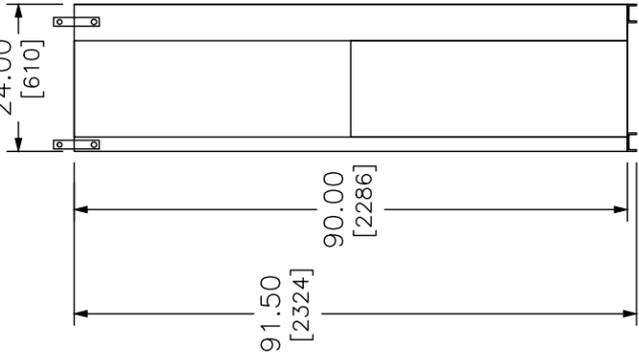
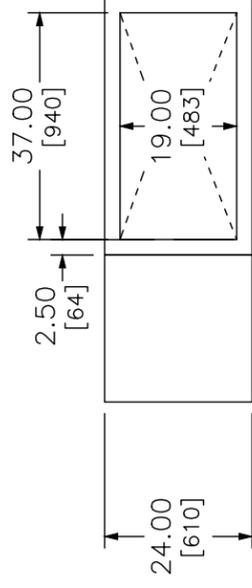
Product Accessories/Options



DUAL DIMENSIONS: INCHES
MILLIMETERS

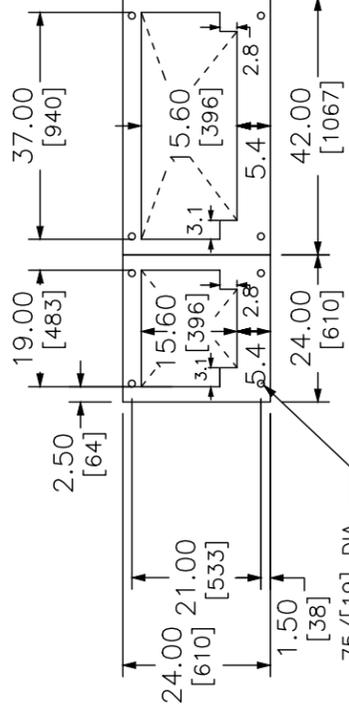
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JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	GENERAL NOTES
ENGR:			
DATE:	April 30 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68607524-01
		PG 1	OF 2
		REV	2

REV	DESCRIPTION	BY	DATE						
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TOP VIEW -- FRONT

LEFT SIDE VIEW



FLOOR PLAN -- FRONT

NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	DPB-P1
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
ENGR:		SQUARE D By Schneider Electric	
DATE:	April 30 2021	DWG#	FQ-2483375-68607524-01
DRAWING STATUS:	QUOTE	PG	2 OF 2
		REV	---

REV	DESCRIPTION	BY	DATE				
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SWITCHBOARD GENERAL NOTES – SERIES 2
PRODUCT DESCRIPTION & RATINGS

Power System Data

208Y/120V 3Ph 4W 60Hz / 3 Phase Wye
 Solidly Grounded
 System Short Circuit Current Rating: 42kA RMS
 Incoming Section 1 Cable Through the Bottom Left of Lineup

T-bus 19.5 in

T-bus 19.5 in

Bus System Data

- 800A Tin/Aluminum & Silver/Copper Main Bus
- (2) .25x2.00 IN/6x51 mm Al Bus Bar Per Phase
- (1) .25x4.50 IN/6x114 mm Al Bus Bar Per Neutral
- (1) .25x1.50 IN/6x38 mm Al Ground Bus

Enclosure Data

Type 1 Free Standing
 Exterior Paint Color: ANSI 49
 Front Accessibility Only Required
 Handling: Rollers & Lifting Assemblies

Estimated Shipping Weight

Shipping Split 1 433.00 lbs / 196.41 kgs
 Shipping Split 2 859.00 lbs / 389.64 kgs
 Complete Lineup 1292.00 lbs / 586.05 kgs

Code Standards

U.L. Deadfront

Rating Nameplates

ST1 – Deadfront – Section Bus 800A
 ST2 – Deadfront – Section Bus 800A

PRODUCT INFORMATION

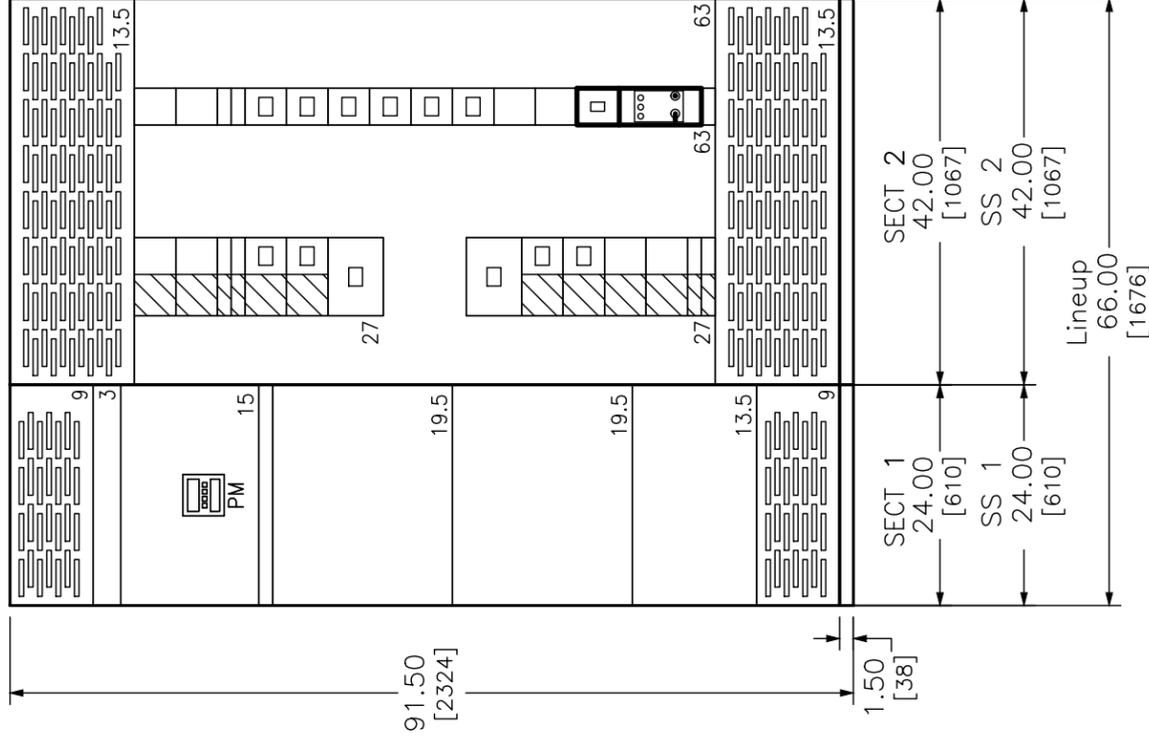
Wiring

All wiring to be Machine Tool Wire type

Instruction Bulletins

Reference 80043-055 For Handling, Installation, Anchoring, Inspection And Maintenance Information

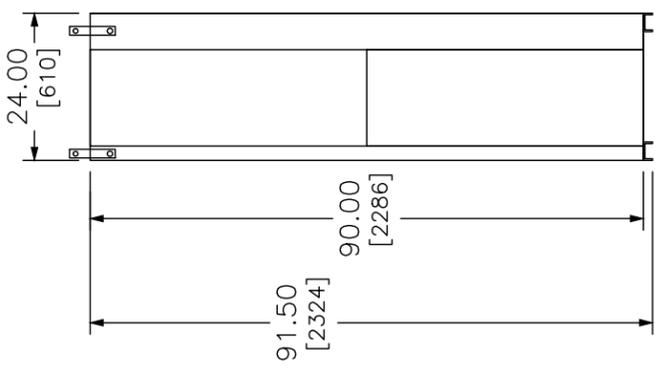
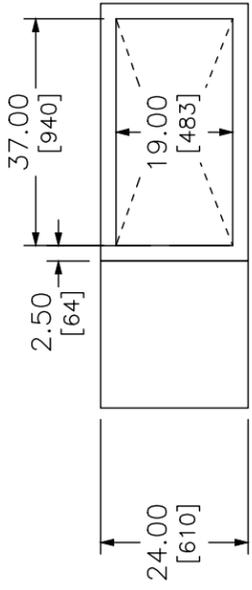
Product Accessories/Options



DUAL DIMENSIONS: INCHES
 MILLIMETERS

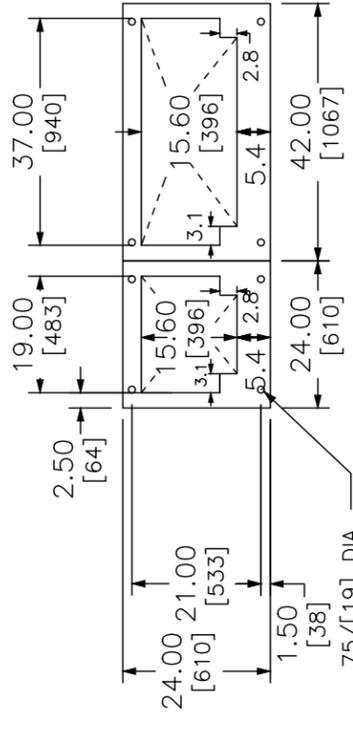
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JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	GENERAL NOTES
ENGR:			
DATE:	April 30 2021		
DRAWING STATUS:	QUOTE	DWG#	FQ-2483375-68607563-01
		PG 1	OF 2
		REV	---

REV	DESCRIPTION	BY	DATE						
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LEFT SIDE VIEW

TOP VIEW -- FRONT



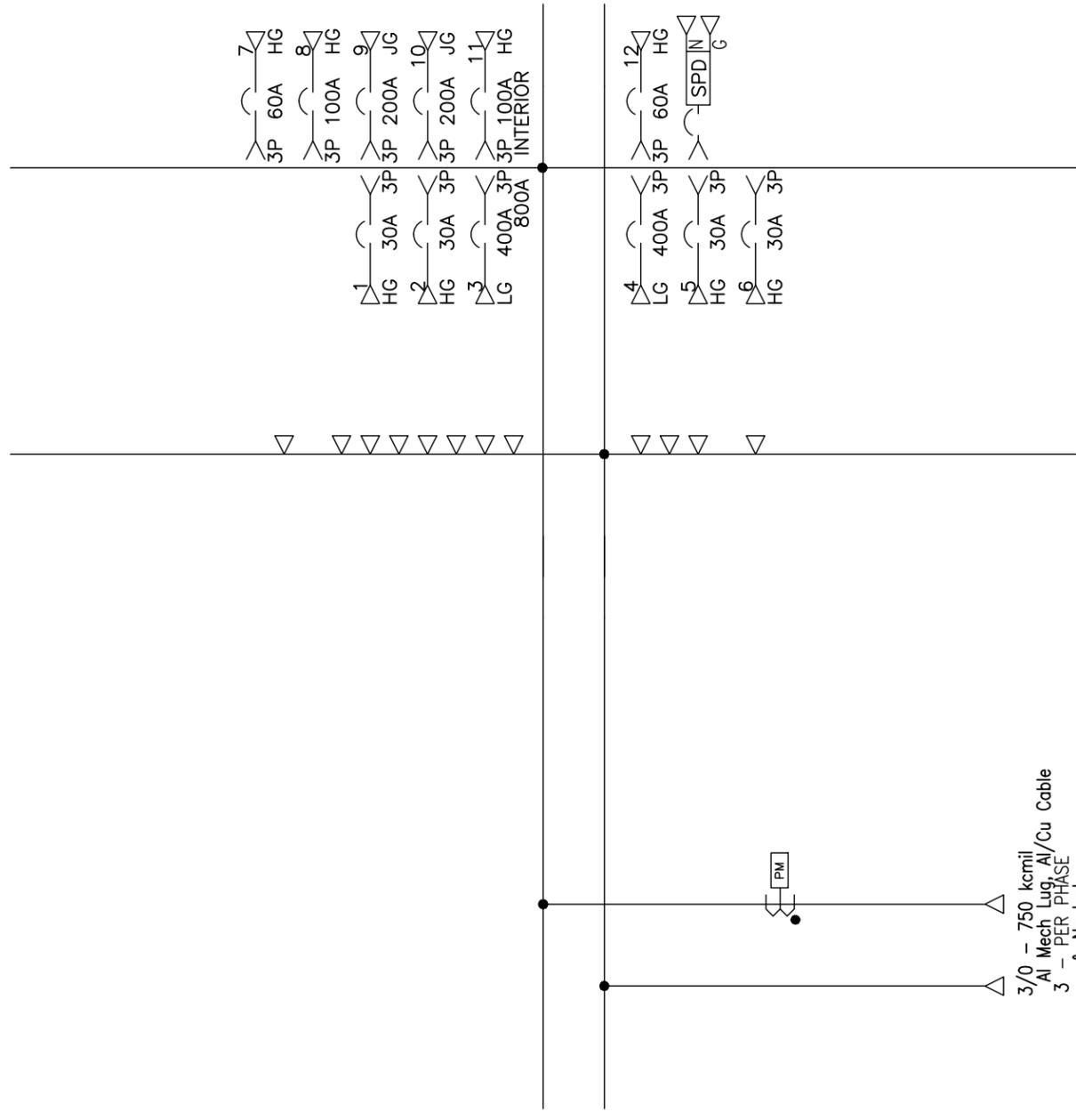
FLOOR PLAN -- FRONT

NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	DPB-M1/M2
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
ENGR:		SQUARE D By Schneider Electric	
DATE:	April 30 2021	DWG#	FQ-2483375-68607563-01
DRAWING STATUS:	QUOTE	PG	2 OF 2
		REV	---

REV	DESCRIPTION	BY	DATE						
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3/0 - 750 kcmil
Al Mech Lug, Al/Cu Cable
3 - PER PHASE
& Neutral

SECTION 1

SECTION 2

JOB NAME:	MW BUDGETS	EQUIPMENT DESIGNATION:	DPB-M1/M2
JOB LOCATION:	(Q2C)	EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:		DRAWING TYPE:	ONE LINE
ENGR:			
DATE:	April 30 2021		
DRAWING STATUS:	QUOTE	DWG#	00-2483375-68607563-01
		PG	1 OF 2
		REV	2





Ecology Dept Switchgear Project

Opinion of Probable Cost - Final Report

Date Prepared: 05/21/2020

Prepared By: D. Cunningham

Switchgear Replacement Option

	<u>Cost</u>
Option 1A - 2500A NEMA 3R Switchboard with Main Circuit Breaker	\$427,356
Option 1B - 1200A NEMA 3R Switchboard with Main Circuit Breaker	\$386,854
Option 2A - 2500A NEMA 1 Switchboard with Main Circuit Breaker	\$318,249
Option 2B - 1200A NEMA 1 Switchboard with Main Circuit Breaker	\$298,573
<i>Option 3A - 2500A NEMA 3R Switchboard without Main Circuit Breaker</i>	<i>n/a</i>
<i>Option 3B - 1200A NEMA 3R Switchboard without Main Circuit Breaker</i>	<i>n/a</i>
<i>Option 4A - 2500A NEMA 1 Switchboard without Main Circuit Breaker</i>	<i>n/a</i>
<i>Option 4B - 1200A NEMA 1 Switchboard without Main Circuit Breaker</i>	<i>n/a</i>
Option 5 - 2500A NEMA 3R Switchboard with Main Circuit Breaker & NEMA 1 Distribution Switchboard	\$462,418
Recommended Budget Without Escalation	\$463,000

Assumptions

1. Excludes Washington State Sales Tax
2. Excludes Escalation beyond May 2021
3. Excludes Construction Contingency
4. Excludes Professional Engineering Services
5. Includes 12% General Contractor Overhead & Profit
6. Includes 18% Subcontractor Overhead & Profit
7. Includes 20% Design Contingency
8. Includes 1% Insurance
8. Includes 0.5% B+O Tax
9. Includes 0.75% Bond

Option 1A - 2500A NEMA 3R Switchboard with Main Circuit Breaker

Item Description	Unit	Quantity	Unit Cost	Total Cost
<u>General Conditions</u>				
Bonds	ls	1	\$3,300.00	\$3,300.00
Boom Truck	day	1	\$300.00	\$300.00
Bucket Truck		0	\$0.00	\$0.00
Cartage, Small Tools	ls	1	\$300.00	\$300.00
Chain Link Fence	ls	1	\$250.00	\$250.00
Crane		0	\$1,500.00	\$0.00
Fork Lift	day	1	\$200.00	\$200.00
Fuel Oil	gallons	200	\$5.00	\$1,000.00
Generator Rental	week	1	\$1,200.00	\$1,200.00
Permit Fees	ls	1	\$3,300.00	\$3,300.00
Safety	ls	1	\$500.00	\$500.00
Supervision	hours	43.5	\$106.80	\$4,645.80
Telephone	ls	0	\$0.00	\$0.00
Trailer	ls	0	\$0.00	\$0.00
Utility Locates	ls	1	\$500.00	\$500.00
Subtotal Direct Cost				\$15,495.80
Profit + Overhead 18%				\$2,789.24
Insurance 1.00%				\$154.96
B+O Tax 0.50%				\$77.48
Bond 0.75%				\$116.22
Subtotal General Conditions				\$18,633.70
<u>Electrical</u>				
Switchgear Quotation		1	\$121,393.30	\$121,393.30
Exterior Switchboard install (135 hrs, 3 men (45) hrs each)	hour	135	\$62.00	\$8,370.00
Interior Switchboard install (150 hrs, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Demolition of Existing Equipment (150 hrs each, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Feeder Avista XFMR to 'MSB'	2500A	30	\$738.35	\$22,150.56
Feeder 'MSB' to 'DSB-M1'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'DSB-M2'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'DSB-P1'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'EV Panel'	225A	20	\$59.56	\$1,191.16
Feeder Terminations	ls	1	\$10,000.00	\$10,000.00
Temporary Power Connections	ls	1	\$5,000.00	\$5,000.00
Subtotal				\$228,344.42
Profit + Overhead 18%				\$41,102.00
Insurance 1.00%				\$2,283.44
B+O Tax 0.50%				\$1,141.72
Bond 0.75%				\$1,712.58
Subtotal Electrical				\$274,584.17

Option 1B - 1200A NEMA 3R Switchboard with Main Circuit Breaker

Item Description	Unit	Quantity	Unit Cost	Total Cost
<u>General Conditions</u>				
Bonds	ls	1	\$3,000.00	\$3,000.00
Boom Truck	day	1	\$300.00	\$300.00
Bucket Truck		0	\$0.00	\$0.00
Cartage, Small Tools	ls	1	\$300.00	\$300.00
Chain Link Fence	ls	1	\$250.00	\$250.00
Crane		0	\$1,500.00	\$0.00
Fork Lift	day	1	\$200.00	\$200.00
Fuel Oil	gallons	200	\$5.00	\$1,000.00
Generator Rental	week	1	\$1,200.00	\$1,200.00
Permit Fees	ls	1	\$3,000.00	\$3,000.00
Safety	ls	1	\$500.00	\$500.00
Supervision	hours	43.5	\$106.80	\$4,645.80
Telephone	ls	0	\$0.00	\$0.00
Trailer	ls	0	\$0.00	\$0.00
Utility Locates	ls	1	\$500.00	\$500.00
			Subtotal	\$14,895.80
			Profit + Overhead 18%	\$2,681.24
			Insurance 1.00%	\$148.96
			B+O Tax 0.50%	\$74.48
			Bond 0.75%	\$111.72
			Subtotal General Conditions	\$17,912.20
<u>Electrical</u>				
Switchgear Quotation		1	\$112,018.44	\$112,018.44
Exterior Switchboard install (135 hrs, 3 men (45) hrs each)	hour	135	\$62.00	\$8,370.00
Interior Switchboard install (150 hrs, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Demolition of Existing Equipment (150 hrs each, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Feeder Avista XFMR to 'MSB'	1200A	30	\$318.84	\$9,565.08
Feeder 'MSB' to 'DSB-M1'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'DSB-M2'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'DSB-P1'	800A	50	\$223.60	\$11,179.80
Feeder 'MSB' to 'EV Panel'	225A	20	\$59.56	\$1,191.16
Feeder Terminations	ls	1	\$7,500.00	\$7,500.00
Temporary Power Connections	ls	1	\$5,000.00	\$5,000.00
			Subtotal	\$203,884.08
			Profit + Overhead 18%	\$36,699.13
			Insurance 1.00%	\$2,038.84
			B+O Tax 0.50%	\$1,019.42
			Bond 0.75%	\$1,529.13
			Subtotal Electrical	\$245,170.61

Option 2A - 2500A NEMA 1 Switchboard with Main Circuit Breaker

Item Description	Unit	Quantity	Unit Cost	Total Cost
<u>General Conditions</u>				
Bonds	ls	1	\$2,500.00	\$2,500.00
Boom Truck	day	1	\$300.00	\$300.00
Bucket Truck		0	\$0.00	\$0.00
Cartage, Small Tools	ls	1	\$300.00	\$300.00
Chain Link Fence	ls	1	\$250.00	\$250.00
Crane		0	\$1,500.00	\$0.00
Fork Lift	day	1	\$200.00	\$200.00
Fuel Oil	gallons	200	\$5.00	\$1,000.00
Generator Rental	week	1	\$1,200.00	\$1,200.00
Permit Fees	ls	1	\$2,500.00	\$2,500.00
Safety	ls	1	\$500.00	\$500.00
Supervision	hours	30	\$106.80	\$3,204.00
Telephone	ls	0	\$0.00	\$0.00
Trailer	ls	0	\$0.00	\$0.00
Utility Locates	ls	1	\$0.00	\$0.00
			Subtotal	\$11,954.00
			Profit + Overhead 18%	\$2,151.72
			Insurance 1.00%	\$119.54
			B+O Tax 0.50%	\$59.77
			Bond 0.75%	\$89.66
			Subtotal General Conditions	\$14,374.69
<u>Electrical</u>				
Switchgear Quotation		1	\$120,302.71	\$120,302.71
Interior Switchboard install (150 hrs, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Demolition of Existing Equipment (150 hrs each, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Feeder Avista XFMR to 'MSB'	2500A	0	\$738.35	\$0.00
Feeder 'MSB' to 'DSB-M1'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'DSB-M2'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'DSB-P1'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'EV Panel'	225A	0	\$59.56	\$0.00
Feeder Terminations	ls	1	\$10,000.00	\$10,000.00
Temporary Power Connections	ls	1	\$5,000.00	\$5,000.00
			Subtotal	\$169,789.15
			Profit + Overhead 18%	\$30,562.05
			Insurance 1.00%	\$1,697.89
			B+O Tax 0.50%	\$848.95
			Bond 0.75%	\$1,273.42
			Subtotal Electrical	\$204,171.45

Option 2B - 1200A NEMA 1 Switchboard with Main Circuit Breaker

Item Description	Unit	Quantity	Unit Cost	Total Cost
General Conditions				
Bonds	ls	1	\$2,350.00	\$2,350.00
Boom Truck	day	1	\$300.00	\$300.00
Bucket Truck		0	\$0.00	\$0.00
Cartage, Small Tools	ls	1	\$300.00	\$300.00
Chain Link Fence	ls	1	\$250.00	\$250.00
Crane		0	\$1,500.00	\$0.00
Fork Lift	day	1	\$200.00	\$200.00
Fuel Oil	gallons	200	\$5.00	\$1,000.00
Generator Rental	week	1	\$1,200.00	\$1,200.00
Permit Fees	ls	1	\$2,350.00	\$2,350.00
Safety	ls	1	\$500.00	\$500.00
Supervision	hours	30	\$106.80	\$3,204.00
Telephone	ls	0	\$0.00	\$0.00
Trailer	ls	0	\$0.00	\$0.00
Utility Locates	ls	1	\$0.00	\$0.00
			Subtotal	\$11,654.00
			Profit + Overhead 18%	\$2,097.72
			Insurance 1.00%	\$116.54
			B+O Tax 0.50%	\$58.27
			Bond 0.75%	\$87.41
			Subtotal General Conditions	\$14,013.94
Electrical				
Switchgear Quotation		1	\$110,927.84	\$110,927.84
Interior Switchboard install (150 hrs, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Demolition of Existing Equipment (150 hrs each, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Feeder Avista XFMR to 'MSB'	1200A	0	\$318.84	\$0.00
Feeder 'MSB' to 'DSB-M1'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'DSB-M2'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'DSB-P1'	800A	15	\$173.03	\$2,595.48
Feeder 'MSB' to 'EV Panel'	225A	0	\$59.56	\$0.00
Feeder Terminations	ls	1	\$7,500.00	\$7,500.00
Temporary Power Connections	ls	1	\$5,000.00	\$5,000.00
			Subtotal	\$157,914.28
			Profit + Overhead 18%	\$28,424.57
			Insurance 1.00%	\$1,579.14
			B+O Tax 0.50%	\$789.57
			Bond 0.75%	\$1,184.36
			Subtotal Electrical	\$189,891.92

Option 5 - 2500A NEMA 3R Switchboard with Main Circuit Breaker and 2500A NEMA 1 Distribution Switchboard

Item Description	Unit	Quantity	Unit Cost	Total Cost
General Conditions				
Bonds	ls	1	\$3,500.00	\$3,500.00
Boom Truck	day	1	\$300.00	\$300.00
Bucket Truck		0	\$0.00	\$0.00
Cartage, Small Tools	ls	1	\$300.00	\$300.00
Chain Link Fence	ls	1	\$250.00	\$250.00
Crane		0	\$1,500.00	\$0.00
Fork Lift	day	1	\$200.00	\$200.00
Fuel Oil	gallons	200	\$5.00	\$1,000.00
Generator Rental	week	1	\$1,200.00	\$1,200.00
Permit Fees	ls	1	\$3,500.00	\$3,500.00
Safety	ls	1	\$500.00	\$500.00
Supervision	hours	39	\$106.80	\$4,165.20
Telephone	ls	0	\$0.00	\$0.00
Trailer	ls	0	\$0.00	\$0.00
Utility Locates	ls	1	\$500.00	\$500.00
			Subtotal	\$15,415.20
			Profit + Overhead 18%	\$2,774.74
			Insurance 1.00%	\$154.15
			B+O Tax 0.50%	\$77.08
			Bond 0.75%	\$115.61
			Subtotal General Conditions	\$18,536.78
Electrical				
Switchgear Quotation		1	\$122,350.00	\$122,350.00
Exterior Switchboard install (90 hrs, 3 men (30) hrs each)	hour	90	\$62.00	\$5,580.00
Interior Switchboard install (150 hrs, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Demolition of Existing Equipment (150 hrs each, 3 men (50) hrs each)	hour	150	\$89.00	\$13,350.00
Feeder Avista XFMR to 'MSB'	2500A	30	\$738.35	\$22,150.56
Feeder 'MSB' to 'DSB'	2500A	50	\$858.08	\$42,904.00
Feeder 'MSB' to 'DSB-M1'	800A	15	\$318.84	\$4,782.54
Feeder 'MSB' to 'DSB-M2'	800A	15	\$318.84	\$4,782.54
Feeder 'MSB' to 'DSB-P1'	800A	15	\$318.84	\$4,782.54
Feeder 'MSB' to 'EV Panel'	225A	0	\$0.00	\$0.00
Feeder Terminations	ls	1	\$15,000.00	\$15,000.00
Temporary Power Connections	ls	1	\$5,000.00	\$5,000.00
			Subtotal	\$254,032.18
			Profit + Overhead 18%	\$45,725.79
			Insurance 1.00%	\$2,540.32
			B+O Tax 0.50%	\$1,270.16
			Bond 0.75%	\$1,905.24
			Subtotal Electrical	\$305,473.70

Capital Project Request

2021-23 Biennium

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Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 9/7/2021 10:28AM

Project Number: 40000465

Project Title: 2022 Clean Up Toxic Sites – Puget Sound

Description

Starting Fiscal Year: 2022

Project Class: Grant

Agency Priority: 3

Project Summary

A significant source of pollution to Puget Sound is contaminated sites around the basin and its shorelines. Ecology has been identifying and cleaning up contaminated sites in the Puget Sound basin for many years. This emphasis on bay -wide cleanup in Puget Sound and surrounding areas has highlighted a valuable link between toxic site cleanup and habitat restoration. This request for \$4 million will support a new project at the Eatonville Landfill that integrates river protection and recreation opportunities with the cleanup to protect public and environmental health, create jobs, and promote economic development. Related to Puget Sound Action Agenda Implementation. (Model Toxics Control Capital Account)

Project Description**What is the proposed project?**

Ecology is requesting \$4 million be added in the 2022 Supplemental to Ecology's Cleanup Toxic Sites – Puget Sound for the cleanup of the former Eatonville Landfill. Work under Ecology's Cleanup Toxic Sites – Puget Sound program is completed through a combination of direct actions by the state, contributions from potentially liable parties, and interagency agreements with affected local governments, resource agencies, and the Tribes. The work typically includes sites adjacent to critical and sensitive habitats; upland sites contributing to ongoing aquatic contamination; and a limited number of sites throughout Western Washington, outside of the Puget Sound basin, and where an unanticipated cleanup investment or emergency response is needed.

The Eatonville landfill is located near the Town of Eatonville in rural Pierce County. The landfill was operated as an uncontrolled dump site for approximately 30 years beginning in 1950, until its closure in March 1980. The approximately two-acre landfill area is unfenced and consists of highly irregular terrain and exposed refuse, including debris such as abandoned appliances, car bodies, drums, and tires. The lower face of the landfill terminates in a high -quality wetland. The wetland is reported to extend to the nearby Mashel River located approximately 500 feet to the south.

The landfill parcel is owned by the Weyerhaeuser Company and was leased by the Town of Eatonville. This request will pay for the Town of Eatonville's share of cleanup costs to address the landfill and associated contamination. Washington State Parks, which owns all the land surrounding the landfill, and other stakeholders, including the Nisqually Indian Tribe, are currently working on the redevelopment of the surrounding property at Nisqually Mashel State Park. A critical phase of construction for that project could begin as early as spring/summer of 2022. Planned improvements at the park include a nearby trailhead parking area, trails, as well as camping facilities that will be used as overflow camping from Mount Rainier National Park. The planned improvements would integrate the landfill parcel into the existing park.

What opportunity or problem is driving this request?

Cleaning up and protecting Puget Sound is critical to the social and economic well -being of Washington residents. This request addresses a critical environmental problem that impacts the economic, environmental, and cultural well -being of local communities and Tribes. Remediation of the Eatonville landfill will permanently remove a known source of heavy metals and suspected source of other toxics and endocrine disruptors impacting fish health in the nearby Mashel River. Reducing these toxic threats will contribute to increased fish population health that can better support the Nisqually Tribe's treaty-secured fishing rights.

The timing of funding for this project is critical because the Town of Eatonville is looking to coordinate the remediation of the landfill with the State Park's redevelopment project at Nisqually Mashel State Park, which is scheduled to begin construction starting in 2022. Completing the remediation project together with the State Park's project will mean that heavy equipment

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Version: S1 2022 Supplemental

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Project Number: 40000465

Project Title: 2022 Clean Up Toxic Sites – Puget Sound

Description

needed for both projects will only need to be deployed once to the rugged terrain surrounds both project sites, increasing efficiencies and reducing overall costs. This opportunity will be lost if this request is not funding in the 2022 supplemental budget.

What are the specific benefits of this project?

This work will benefit Washington residents by achieving the much sought after economic and social benefits of a clean, restored Puget Sound. Specifically, benefits of this request include:

- Cleaned up contaminated sites.
- Reduced exposure of hazardous substances to the environment and public as work progresses on these sites.
- Planned economic redevelopment as abandoned sites move through the cleanup process.
- Continued cleanup and restoration of Puget Sound.

This request will also provide economic benefits to the state by creating up to 20 jobs during the next two years based on Office of Financial Management estimates.

What are the effects of non-funding?

As noted above, the timing for this project is critical because the Town of Eatonville is looking to coordinate the remediation of the landfill with the redevelopment project at Nisqually Mashel State Park, which is scheduled to begin construction starting in 2022. Completing the remediation project together with the State Park's project will mean that heavy equipment needed for both projects will only need to be deployed once to the rugged terrain surrounds both project sites, increasing efficiencies and reducing overall costs. This opportunity will be lost if this request is not funding in the 2022 supplemental budget.

Not only would a delay in cleanup cause increased costs because a second deployment of heavy equipment would be required, it could also decrease user experiences at the state park and negatively impact the improvements made in 2022. There is also the potential that the eventual cleanup would be further delayed, as designs for the improvements at Nisqually Mashel State Park would have to work around the existing landfill, instead of integrating the cleaned up landfill into those planned improvements.

Why is this the best option or alternative?

Collaboration between the Town of Eatonville, Weyerhaeuser Company, the Nisqually Indian Tribe, Washington State Parks, and Ecology for this project is currently ongoing. Ecology is using current funding to move forward with an agreement to conduct a Remedial Investigation and Feasibility Study in preparation for the construction in 2022. This collaboration, and the proposed joint-deployment of heavy equipment in for both projects 2022, is critical to making this cleanup possible and cost effective.

How will clients be affected and services change if this project is funded?

This request will continue ongoing efforts and result in local cleanups and land redevelopment within the Puget Sound region. Cleaning up contaminated property is usually integrated with economic development, habitat restoration, and public recreation projects. Most cleanup projects are the first phase of a larger community or economic redevelopment project where the cleanup site is the focal point of the project.

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Description

Collaboration on this cleanup involves support from Town of Eatonville, Weyerhaeuser Company, the Nisqually Indian Tribe, and State Parks. By completing this project in coordination with work being done by State Parks, it will allow the Town of Eatonville and Ecology to take advantage of heavy equipment already on site for the Nisqually Mashel State Park redevelopment project in order to expedite and reduce costs for the cleanup.

How is the proposal impacting equity in the state?

The Nisqually Indian Tribe is a partner in this project and provided the following information describing its importance. This request addresses a critical environmental problem that impacts the economic, environmental, and cultural well-being of local communities and Tribes. The Nisqually Indian Tribe is signatory to the 1854 Treaty of Medicine Creek in which they reserved their fishing, hunting, and gathering rights to the Nisqually watershed. In reaffirming these rights, the federal courts have also recognized their sovereign management responsibility to these critical natural resources. The Tribe's culture and traditions are directly connected to the salmon and steelhead of the Mashel River. It is also the historic site of Nisqually villages and the Mashel prairie massacre of 1856, and continues today in its importance to the Tribe.

Two species of salmon that use the Mashel as critical spawning and rearing habitat, Fall Chinook salmon and steelhead trout, are both central to the Tribe's treaty secured fishing rights and are listed as threatened under the Endangered Species Act. The limited abundance of both species significantly constrain treaty fishing. The depressed populations are due to a number of factors including habitat loss in terms of quality and quantity.

Steelhead are the most limited and have been reduced below their escapement spawning objective for most of the past 30 years. A fish that once supported the Tribe through the harsh winter months with harvest of around 2,000 is now seldom seen in the nets of tribal fishers, with most years recording zero harvest since 1992. Water quality degradation is a significant factor in their decline and the resolution of these impacts is critical to their recovery and the Tribe's treaty secured fishing rights.

Landfill remediation will permanently remove a known source of heavy metals and suspected source of other toxics and endocrine disruptors. Reducing these toxic threats will contribute to increased fish population health that can better support the Tribe's treaty-secured fishing rights.

What is the agency's proposed funding strategy for the project?

Traditionally, the Clean Up Toxic Sites – Puget Sound projects have been funded with MTCA dollars. Ecology requests funding from the MTCA Capital Account to complete projects that integrate shoreline habitat restoration opportunities with cleanup projects to protect public and environmental health, create jobs, and promote economic development.

Using MTCA-Capital funds for this project is consistent with the purposes of MTCA, Chapter 7A0.305 RCW, and the MTCA-Capital Account, RCW 70A.305.190, which establishes that funds in the account must be used for the improvement, rehabilitation, remediation, and cleanup of toxic sites. To do this work, a tax is assessed on hazardous materials, including petroleum products, pesticides, and some chemicals.

Every two years, Ecology is required to provide the Legislature with a comprehensive report: "Model Toxics Control Accounts (MTCA) Ten-Year Financial Report." Ecology produces this report in coordination with local governments that have cleanup responsibilities. It identifies the projected financial needs to cleanup up contaminated sites that are eligible for funding from the Model Toxics Control Capital Account. The MTCA 2020 10-Year Financing Report is available here: <https://apps.ecology.wa.gov/publications/summarypages/1909051.html/summarypages/2009060.html>.

The MTCA Ten-Year Financing Report describes how we plan to spend funds to clean up sites in the upcoming biennium and

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Project Number: 40000465

Project Title: 2022 Clean Up Toxic Sites – Puget Sound

Description

the next ten years. Ecology produces this report during even -numbered years.

Its companion report, the MTCA Biennial Report of Expenditures, describes how cleanup funds were spent over the previous biennium. Ecology produces the Biennial Report of Expenditures during odd -numbered years. Find the 2019 Biennial Report online at <https://fortress.wa.gov/ecy/publications/SummaryPages/1909045.html>.

Are FTEs required to support this project?

No.

How does the project support the agency and statewide results?

This request is essential to implementing Goal 3: Prevent and Reduce Toxic Threats and Pollution in Ecology's strategic plan because it supports the strategy to ensure that pollution and contaminated sites, including legacy environmental contamination, are managed and cleaned up while taking into consideration environmental justice, environmental and human health, community needs, and economic vitality. It also contributes resources to continue activity A 005, Clean Up the Most Contaminated Sites First (Upland and Aquatic).

The request is also essential in supporting the Governor's Energy and Environment priority issues by investing funds to clean up contaminated sites and protect public health and natural resources. It also supports Results Washington Goal 3: Sustainable Energy and a Clean Environment, by cleaning up and managing contaminated sites that pose threats to public health, the environment, groundwater, and fish and wildlife resources.

This work also supports Results Washington Goal 2: Prosperous Economy, by creating and supporting jobs and making it possible to redevelop previously contaminated land to support economic growth in communities.

This request also supports Governor Inslee's Executive Order 18-02, Southern Resident Killer Whale Recovery and Task Force, by supporting cleanup projects that reduce legacy and address new toxic contaminants in Puget Sound and increase fish population health. The Order lists toxic contaminants as one of the three primary factors threatening the Southern Resident orca population. This request will reduce contaminant migration via stormwater that is harmful to orcas.

This request supports Puget Sound Action Agenda implementation through Ongoing Program OGP _ECY 20: Toxic Cleanup Program - Cleaning up priority bays in Puget Sound (Department of Ecology) and is linked to the following Regional Priorities, Strategies, and Sub-strategies:

- Regional Priority TIF 1.1: Enhance pollutant reduction programs and corrective measures, and increase authorities and programs to prevent toxic chemicals from entering Puget Sound. By cleaning up toxic legacy pollutants, Ecology prevents these damaging chemicals from entering the Puget Sound and other potential routes for exposure.
- Regional Priority TIF 3.1: Provide the infrastructure and incentives to accommodate new development and redevelopment within designated urban centers in Urban Growth Areas. By cleaning up brownfield properties, Ecology helps to incentivize growth within Urban Growth Areas.
- Strategy 9: Prevent, reduce, and control the sources of contaminants entering Puget Sound.
- Sub-strategy 9.1: Implement and strengthen authorities and programs to prevent toxic chemicals from entering the Puget Sound ecosystem.

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Project Title: 2022 Clean Up Toxic Sites – Puget Sound

Description

- Strategy 10: Use a comprehensive approach to manage urban stormwater runoff at the site and landscape scales.
- Sub-strategy 10.3: Fix problems caused by existing development.
- Sub-Strategy 10.4: Control sources of pollutants.
- Strategy 21: Address and clean up cumulative water pollution impacts in Puget Sound.
- Sub-strategy 21.2: Clean up contaminated sites within and near Puget Sound by reducing and controlling the sources of pollution.

This request supports the Action Agenda’s implementation by reducing and controlling the sources of pollution. Ecology's work to clean up areas contaminated with hazardous substances returns a polluted or degraded environment, as much as possible, to a healthy, self-sustaining ecosystem.

Ecology's focused work in Puget Sound will be accomplished by making direct state investments, using contributions by potentially liable parties, and entering into interagency agreements with affected local governments and resource agencies.

How will the other state programs or units of government be affected if this project is funded?

This cleanup project is part of the Puget Sound Initiative, which is a collaborative effort by local, triba state, and federal governments; businesses; agricultural and environmental interests; and the public, to help preserve and protect Puget Sound. The Eatonville landfill cleanup will be coordinated with the Town of Eatonville, Weyerhaeuser Company, the Nisqually Indian Tribe, and State Parks to take advantage of equipment already on site in the spring/summer of 2022.

Proviso

N/A

Location

City: Unincorporated

County: Pierce

Legislative District: 002

Project Type

Grants

Grant Recipient Organization: N/A

RCW that establishes grant: N/A

Application process used

N/A

Growth Management impacts

N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2021-23 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
23N-1	MTC Capital Account-State	4,000,000				4,000,000

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Version: S1 2022 Supplemental

Report Number: CBS002

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Project Number: 40000465

Project Title: 2022 Clean Up Toxic Sites – Puget Sound

Funding					
Total	4,000,000	0	0	0	4,000,000
	Future Fiscal Periods				
	2023-25	2025-27	2027-29	2029-31	
23N-1 MTC Capital Account-State					
Total	0	0	0	0	

Operating Impacts

No Operating Impact

SubProjects

SubProject Number: 40000466

SubProject Title: Former Eatonville Landfill

Starting Fiscal Year: 2022

Project Class: Grant

Agency Priority: 3

Project Summary

A significant source of pollution to Puget Sound is contaminated sites around the basin and its shorelines. Ecology has been identifying and cleaning up contaminated sites in the Puget Sound basin for many years. This emphasis on bay -wide cleanup in Puget Sound and surrounding areas has highlighted a valuable link between toxic site cleanup and habitat restoration. This request for \$4 million will support a new project at the Eatonville Landfill that integrates river protection and recreation opportunities with the cleanup to protect public and environmental health, create jobs, and promote economic development. Related to Puget Sound Action Agenda Implementation. (Model Toxics Control Capital Account)

Project Description

The former Eatonville Landfill is located near the Town of Eatonville in rural Pierce County. The landfill was operated as an uncontrolled dump site for approximately 30 years beginning in 1950 until its closure in March 1980. The lower face of the landfill terminates in a high-quality wetland that extends to the nearby Mashel River located approximately 500 feet to the south. The landfill parcel is owned by the Weyerhaeuser Company and was leased by the Town of Eatonville. The landfill is completely surrounded by land owned by Washington State Parks. State Parks and other stakeholders, as well as the Nisqually Indian Tribe are working on the redevelopment of the surrounding property at Nisqually Mashel State Park, with critical phase construction planned as early as spring/summer 2022. Planned improvements include a nearby trailhead parking area, as well as trails and camping facilities that would be used as overflow camping from Mount Rainier National Park.

Location

City: Unincorporated

County: Pierce

Legislative District: 002

Project Type

Grants

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Version: S1 2022 Supplemental

Report Number: CBS002

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Project Number: 40000465

Project Title: 2022 Clean Up Toxic Sites – Puget Sound

SubProjects

SubProject Number: 40000466

SubProject Title: Former Eatonville Landfill

Grant Recipient Organization: N/A

RCW that establishes grant: N/A

Application process used
 N/A

Growth Management impacts

N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2021-23 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
23N-1	MTC Capital Account-State	4,000,000				4,000,000
	Total	4,000,000	0	0	0	4,000,000
Future Fiscal Periods						
		<u>2023-25</u>	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	
23N-1	MTC Capital Account-State	0	0	0	0	
	Total	0	0	0	0	

Operating Impacts

No Operating Impact

Ecology 2022 Supplemental Capital Budget Project List
 Toxics Cleanup Program
 Clean Up Toxic Sites - Puget Sound



August 2021

Purpose: This list provides project details about the 2022 Supplemental Clean Up Toxics Sites - Puget Sound budget request. This list includes a cleanup project that is underway and needs funding to support the cleanup for a ready to proceed project. The project was considered according to phase of cleanup, acuity of need, readiness to proceed, cost efficiency, and geographic distribution for each project was conducted. This list is a plan based on the best information available to Ecology. The plan may change as more information becomes available.

Rank	Project Title	Project Description	Amount	Phase of Cleanup	Site Address	City	County	Leg. District	WRIA	Lat.	Long.
1	Former Eatonville Landfill	The former Eatonville Landfill is located near the Town of Eatonville in rural Pierce County. The landfill was operated as an uncontrolled dump site for approximately 30 years beginning in 1950 until its closure in March 1980. The lower face of the landfill terminates in a high-quality wetland that extends to the nearby Mashel River located approximately 500 feet to the south. The landfill parcel is owned by the Weyerhaeuser Company and was leased by the Town of Eatonville. The landfill is completely surrounded by land owned by Washington State Parks, State Parks and other stakeholders, as well as the Nisqually Indian Tribe are working on the redevelopment of the surrounding property at Nisqually Mashel State Park, with critical phase construction planned as early as spring/summer 2022. Planned improvements include a nearby trailhead parking area, as well as trails and camping facilities that would be used as overflow camping from Mount Rainier National Park.	4,000,000	Cleanup Construction	None	Unincorporated	Pierce	2	11 - Nisqually	46.86006	-122.32225
		TOTAL	4,000,000								

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2021-23 Biennium

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Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 8/16/2021 10:38AM

Project Number: 40000464

Project Title: Pacific Wood Treating Site Cleanup – Cleanup Settlement Account

Description

Starting Fiscal Year: 2022

Project Class: Grant

Agency Priority: 4

Project Summary

This request will provide appropriation authority for a settlement deposited by Union Pacific Railroad Company into the Cleanup Settlement Account for the Pacific Wood Treating site in October 2020. Ecology plans to hire contractors to remove dioxin impacted soil from residential properties and road right-of-ways in Ridgefield. This request will require Ecology to pay for transport and landfill disposal costs for the excavated soil and purchase replacement soil and transport, and contractor costs for yard and right-of-way restoration layout, materials, and labor. Yard soil removal is required on 15 residential properties and 36 right-of-ways (see attached Figure A). This work will complete the cleanup of the off-property portion of the site. The other parts of the site have already been cleaned up. (Cleanup Settlement Account)

Project Description

What is the proposed project?

Ecology is requesting \$2,326,000 from the Cleanup Settlement Account (CSA) for the Pacific Wood Treatment site cleanup. The CSA was created by the Legislature in 2008 as an interest-bearing account in the state treasury. Its purpose is to manage money from settlements or court orders in cases of bankruptcy, limited ability to pay, or natural resource damages. The account ensures settlement funds are linked to specific site cleanup activities or to address injuries to natural resources.

The off-property portion of the Pacific Wood Treating site was impacted by the Pacific Wood Treating facility that operated from 1964-1993. Contamination spread from trucks transporting freshly treated lumber and soil particles spread by the wind. These two sources contaminated shallow soil in residential yards and right -of-ways in the off-property portion of the site adjacent to the wood treating operations. The Pacific Wood Treating facility and most of the off-property portion of the site have already been cleaned up by the Port of Ridgefield with prior Remedial Action Grant funding from Ecology.

The Port of Ridgefield owns the facility property and is a potentially liable person (PLP) under the Model Toxics Control Act (MTCA). The only remaining areas of the site requiring cleanup are 15 residential properties and 36 right-of-ways in the Off-property portion of the site. Another PLP, Union Pacific Railroad, settled their MTCA liability with the state, and that settlement was deposited into the CSA. This request is for appropriation authority to spend the settlement to complete the remaining cleanup.

What opportunity or problem is driving this request?

In October 2020, the State of Washington received settlement funds from Union Pacific Railroad Company to pay for the remaining off-property cleanup at the Pacific Wood Treating site. Requesting the appropriation authority to spend the entire settlement at one time will allow for the efficient and effective delivery of the interconnected public works contracts. The community is eager to have the remaining yards and right-of-ways cleaned up as soon as possible. Further delay is not recommended.

What are the specific benefits of this project?

Funding this request will continue the final cleanup activities for the off-property portion of the Pacific Wood Treating site. This work includes 15 residential properties and 36 right-of-ways.

This request will also provide economic benefits to the state by creating up to 23 jobs during the next two years based on Office of Financial Management estimates.

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Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 8/16/2021 10:38AM

Project Number: 40000464

Project Title: Pacific Wood Treating Site Cleanup – Cleanup Settlement Account

Description

What are the effects of non-funding?

If this request is not approved, the settlement funds received and deposited into the CSA would not be available for cleanup activities. As a result, residents would continue to experience exposure risks from their own property and neighborhood right-of-ways. Providing the entire appropriation ensures no funding gaps or stalls between contracts, which would likely increase total project costs.

Why is this the best option or alternative?

Proceeds from the Union Pacific Railroad Company settlement were deposited into the CSA and can only be used to pay for the costs associated with the Pacific Wood Treating site. This is the only mechanism for accessing the funds in the CSA for this cleanup.

How will clients be affected and services change if this project is funded?

Local residents will have reduced exposure to contamination through the cleanup of dioxin impacted soil both on their properties and on nearby right-of-ways.

How is the proposal impacting equity in the state?

The settlement is for a specific project to complete the cleanup of the off-property portion of the site, which is adjacent to the former industrial facility. Yard soil removal is required on 15 residential properties and 36 right-of-ways. This cleanup will reduce risk of the residents (yard cleanup) and the general public who use the area (right-of-way). Unless the contamination is cleaned up, residents will continue to risk exposure to contamination from their own yards and neighboring right-of-ways.

To comply with Title VI nondiscrimination obligations, and to promote environmental justice best practices for meaningful community engagement, Ecology will ensure effective communication and outreach that addresses linguistic, cultural, literacy, technology, and accessibility barriers. Ecology maintains a contract for 24/7 interpretation services, and if determined necessary, Ecology will translate written information into the appropriate languages for residents and community affected by this cleanup.

What is the agency's proposed funding strategy for the project?

Settlement funds from Union Pacific Railroad were deposited into the CSA in October of 2020. Funds must be used exclusively for cleaning up the Pacific Wood Treatment site.

Are FTEs required to support this project?

No.

How does the project support the agency and statewide results?

This request is essential to implementing Goal 3: Prevent and Reduce Toxic Threats and Pollution in Ecology's strategic plan, because it supports the strategy to ensure that pollution and contaminated sites, including legacy environmental contamination, are managed and cleaned up while taking into consideration environmental justice, environmental and human health, community needs, and economic vitality. It also contributes resources to continue activity A005, Clean Up the Most Contaminated Sites First (Upland and Aquatic).

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Date Run: 8/16/2021 10:38AM

Project Number: 40000464

Project Title: Pacific Wood Treating Site Cleanup – Cleanup Settlement Account

Description

The request is also essential in supporting the Governor’s Energy and Environment priority issues. It supports Results Washington Goal 3: Sustainable Energy and a Clean Environment, by investing funds that protect public health and natural resources by cleaning up and managing contaminated upland sites and sediments in the aquatic environment.

How will the other state programs or units of government be affected if this project is funded?

Ecology continues to engage the City and Port of Ridgefield and update the public and stakeholders (e.g., neighborhood groups and legislative delegations) through public meetings, mailing fliers and focus sheets and public comment periods on various documents. The community is eager for the remaining off -property cleanup to be completed.

Proviso

N/A

Location

City: Ridgefield

County: Clark

Legislative District: 018

Project Type

Grants

Grant Recipient Organization: N/A

RCW that establishes grant: N/A

Application process used

N/A

Growth Management impacts

N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2021-23 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
15H-1	Cleanup Set Acct-State	2,326,000				2,326,000
	Total	2,326,000	0	0	0	2,326,000
Future Fiscal Periods						
		<u>2023-25</u>	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	
15H-1	Cleanup Set Acct-State	0	0	0	0	
	Total	0	0	0	0	

Operating Impacts

No Operating Impact

Figure A: Map for yard soil removal on 15 residential properties and 36 rights-of-way from Cleanup Action Plan for the Pacific Wood Treating Site (off-property portion).



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Version: S1 2022 Supplemental

Report Number: CBS002

Date Run: 9/7/2021 11:58AM

Project Number: 40000468

Project Title: Lacey HQ Parking Garage Preservation Project Financing Request

Description

Starting Fiscal Year: 2022

Project Class: Preservation

Agency Priority: 5

Project Summary

In 2021 Ecology requested funding to complete a parking garage restoration project at the Lacey headquarters building. That request was ultimately not funded in the 2021-23 capital budget, but in section 7002(7) of that budget bill, the Legislature directed Ecology to submit a financing contract proposal to fully fund the project, including financing expenses and required reserves pursuant to Chapter 39.94 RCW, as part our 2022 supplemental capital budget request. This capital project request is intended to fulfill that directive. Per Office of Financial Management budget instructions (chapter 4), and guidelines from the Office of the State Treasurer, state law (RCW 39.94.040) requires prior legislative approval of real property financing contracts, typically in the capital budget. Based on feedback from legislative fiscal staff this summer, confirming that the language in section 7002(7) did not provide this required legislative approval to finance the costs of this project through a Certificate of Participation, Ecology is now seeking that explicit approval through this request.

Project Description

What is the proposed project?

Ecology is requesting legislative approval to finance a \$3,797,000 Certificate of Participation (COP) to support Ecology's Lacey headquarters (HQ) building parking garage restoration project. Ecology requests that a new subsection be added to section 7002 of the 2021-23 capital budget to read:

- (X) Department of ecology: Enter into a financing contract for up to \$3,797,000 plus financing expenses and required reserves pursuant to chapter 39.94 RCW to repair and restore the parking garage located at ecology's lacey headquarters building.

Please note, this request does not seek appropriation authority to support the COP, only the legislative approval required to enter into the financing contract. Ecology will request additional appropriation authority needed to fund the COP through a 2023-25 operating budget request so that payments can be cost allocated across all of our eligible fund sources.

To help illustrate what those future COP payment amounts will be, attached is an estimated payment schedule provided by the Office of the State Treasurer on August 11, 2021, based on a total project cost of \$3,797,000, and financed over a 20-year term. According the Office of the State Treasurer, this is the most common approach taken by state agencies for this type of COP. Please note that the attachment payment schedule may be different from the final payment schedule Ecology receives once we enter into the COP. Our 2023-25 operating budget request will be based on that final payment schedule.

The information below, including associated attachments, comes from Ecology's 2021-23 capital project request for the parking garage, and is intended to provide background and context regarding this restoration project.

The parking garage at Ecology's Lacey HQ building was constructed in 1993. While it has undergone regular maintenance and minor repairs over the years, major restoration is now required to preserve it and prevent further deterioration which could result in traumatic failure of the structure. Previous repairs to the garage exposed evidence that confirms ongoing water penetration from the upper decks. The water penetration is compromising the internal metal components of the parking structure and will at some point, cause unsafe conditions resulting in closing of the garage. Water intrusion has accelerated the degradation and concrete chunks and debris have fallen on vehicles parked on lower levels – running the risk of personal injury should someone be walking or driving underneath when this occurs.

Engineering consultants Wetherholt and Associates identified problems in their 2013 Parking Deck Condition Evaluation. Specifically, these issues included deterioration of concrete surfaces, exposed wire mesh on driving and parking surfaces,

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Project Number: 40000468

Project Title: Lacey HQ Parking Garage Preservation Project Financing Request

Description

degraded joints, and cracking of concrete slabs, columns, corbels and beams. Since that consultation, Ecology facility staff have seen significant additional degradation.

In the spring of 2020, Ecology contracted with firms to conduct updated structural, engineering, and condition evaluations, and provide updated recommendations and cost estimates for the garage. These inspections confirmed that the parking garage is still safe to use, but also that Ecology should not delay any longer in proceeding with the identified repairs, restoration, and protective measures needed. Delays may lead to unsafe conditions and may require the parking garage to be closed.

Those evaluations provide specific recommendations and cost estimates that were used as a basis for the 2021-23 request (see attached assessments). The restoration project is expected to take six months to complete and would result in the preservation of the parking garage and avoid further degradation. If this project is delayed, further deterioration is likely and repairs would be costlier.

This project will repair all of the accessible damage caused by the water intrusion and the normal wear and tear caused by 27 years of use. All sealant joints throughout the garage will be removed and replaced and all driving and parking surfaces will be cleaned and sealed. The exposed upper deck of the parking garage will be repaired, re-surfaced, and sealed and all structural elements of the parking garage will be repaired as needed. Ecology will also address all safety concerns, including damage to the fire suppression system in the garage caused by the water penetration.

What opportunity or problem is driving this request?

The 27-year old parking structure at the Lacey HQ facility continues to degrade. As the photos in the attached assessments demonstrate, continued deterioration of the top deck parking surface has resulted in substantial leakage through lower levels and is causing cracking of structural members. Continued leaking is weakening the structure and has caused substantial corrosion of the fire suppression system water piping. The agency had to replace piping and associated components of the fire suppression system to maintain its integrity and ensure the sprinklers remained operable. Exposed wire mesh on driving and parking surfaces puts agency and employee vehicles at risk of damage. Degraded and cracked concrete slabs, columns, beams, and corbels indicate the garage could become structurally unsound, which would require Ecology to find parking for approximately 500 vehicles, if the City of Lacey deemed the structure unsafe.

This project is necessary to ensure the safety and structural integrity of the Lacey HQ parking garage. Completing this preservation project will reduce needs on Ecology's deferred maintenance backlog by fixing known deficiencies and preventing further deterioration, which will help to avoid costlier repairs in the future.

What are the specific benefits of this project?

This project will repair previous damage to the garage from water infiltration and 27 years of wear and tear. It will also stop the current water infiltration, halting further deterioration, and address critical needs that could cause adverse conditions, safety risks, or more expensive repairs. Preserving the condition of this structure will provide employees and Ecology's fleet with a safe, secure parking environment to support agency business operations.

The Lacey HQ facility is Ecology's headquarters and base of statewide operations, providing office space and infrastructure for more than 950 employees as well as other state and federal agency tenants. The garage provides parking for many of these employees and for 76 fleet vehicles used for business travel and field work.

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Description

What are the effects of non-funding?

This request was not funded in the 2021-23 capital budget, and Ecology is now seeking legislative approval to finance a COP to support this restoration project. If approval to finance the costs of this project is not provided, the parking garage will soon become structurally unsound and unsafe to use. This would ultimately lead to the parking garage being closed. This would have negative consequences on Ecology's business operations and will compromise the safety of employees, building tenants, and visitors.

If financing approval is not provided, Ecology would have to redirect existing resources within its operating budget away from core environmental and public health work to fund these repairs. The safety concerns related to the parking garage have risen to a level that Ecology would not be able to wait any longer for other funding options.

Why is this the best option or alternative?

There are no feasible alternatives to this project. The specific problems identified by the Parking Deck Condition Evaluations completed in 2013 and 2020 continue to worsen as deterioration accelerates over time.

How will clients be affected and services change if this project is funded?

Providing financing approval will allow Ecology to continue providing services to stakeholders, including residents, businesses, and government partners.

How is the proposal impacting equity in the state?

N/A

What is the agency's proposed funding strategy for the project?

Based on direction provided in the 2021-23 capital budget, Ecology is requesting legislative approval to pursue financing for this project through a COP provided by the Office of the State Treasurer. Ecology intends to request additional appropriation authority needed to pay for the semi-annual payments associated with the COP through a 2023-25 operating budget request.

Are FTEs required to support this project?

Based on Ecology's 2021-23 capital project request, this project will require 1.15 total FTE (Construction Project Coordinator 3) to oversee project development, bid/construction documents, and construction management of this project. The deterioration of the parking garage over the last decade has been quite significant, and the repairs to the facility are expected to be complex, requiring an additional FTE to oversee the project. Current facility staff do not have capacity to do this work.

Please note, this FTE is not being requested as part of this capital project request, and would be part of the overall cost of the COP entered into by Ecology.

How does the project support the agency and statewide results?

This project is essential to implementing the following goals in Ecology's strategic plan:

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Description

- Goal 1: Support and engage our communities, customers, and employees.
- Goal 2: Reduce and prepare for climate impacts.
- Goal 3: Prevent and reduce toxic threats.
- Goal 4: Protect and manage our state’s waters.
- Goal 5: Protect and restore Puget Sound.

Keeping Ecology facilities in good condition is critical to providing a safe and efficient operating base where Ecology employees do the work to meet our strategic goals and engage the public.

This request is a high priority on Ecology’s risk register under Facility Preservation risks, and will allow Ecology to comply with Executive Order 16-06 – State Agency Enterprise Risk Management. It supports the risk management and operation support services objectives to:

- Maintain headquarters, regional, and field offices that support staff in meeting current business.
- Monitor environmental performance of facilities and engage staff in targeted improvements that contribute to the sustainability of our operations.
- Deliver shared services in an efficient and sustainable manner.

This request provides essential support to the Governor’s Results Washington Goal 5: Efficient, Effective, and Accountable Government, by ensuring Ecology facilities are safe, well -maintained, and operate efficiently.

How will the other state programs or units of government be affected if this project is funded?

Providing legislative approval to finance this project will positively impact Ecology and other agencies and government entities that work closely with us. Ecology’s headquarters building provides a safe and efficient operating base for Ecology environmental programs, administration in Lacey and Southwest Washington, and houses partner agencies like the Washington Conservation Commission and the federal Environmental Protection Agency. Maintaining this building in good condition will benefit these other agencies directly.

Proviso

RCW 39.94.040(4) requires that state agencies receive legislative approval prior to financing major facility restoration projects. Ecology requests that a new subsection be added to section 7002 of the 2021-23 capital budget to read: - (X) Department of ecology: Enter into a financing contract for up to \$3,797,000 plus financing expenses and required reserves pursuant to chapter 39.94 RCW to repair and restore the parking garage located at ecology’s lacey headquarters building.

Location

City: Lacey

County: Thurston

Legislative District: 022

Project Type

Facility Preservation (Minor Works)

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Project Title: Lacey HQ Parking Garage Preservation Project Financing Request

Description

Growth Management impacts

N/A

Operating Impacts

No Operating Impact

Narrative

There is no current impact to the state operating budget. Ecology will request additional appropriation authority through a 2023-25 operating budget request to pay for the semi -annual financing payments associated with the COP. If that future appropriation authority is not provided, beginning in 2023-25, we would need to fund these payments out of our base operating budget, which would negatively impact core environmental and public health work done by Ecology staff and our partners. To help illustrate what those future COP payment amounts will be, attached is an estimated payment schedule provided by the Office of the State Treasurer on August 11, 2021, based on a total project cost of \$3,797,000, and financed over a 20-year term. According the Office of the State Treasurer, this is the most common approach taken by state agencies for this type of COP. Please note that the attachment payment schedule may be different from the final payment schedule Ecology receives once we enter into the COP. Our 2023-25 operating budget request will be based on that final payment schedule.

Washington State Office of the State Treasurer

Ecology - HQ Parking Garage Renovation

August 11, 2021

<u>20 Year Term</u>			<u>15 Year Term</u>			<u>10 Year Term</u>		
Delivery Date	June 2023		Delivery Date	June 2023		Delivery Date	June 2023	
Project Funds	\$3,797,000		Project Funds	\$3,797,000		Project Funds	\$3,797,000	
All-In Interest Cost	2.41%	3.12%	All-In Interest Cost	1.82%	2.65%	All-In Interest Cost	1.14%	2.13%

Payment Date	Debt Service - Current Interest Rates	Debt Service - Pessimistic Scenario
12/1/2023	\$ 75,542	\$ 80,822
6/1/2024	\$ 160,125	\$ 175,375
12/1/2024	\$ 73,000	\$ 78,000
6/1/2025	\$ 168,000	\$ 178,000
12/1/2025	\$ 70,625	\$ 75,500
6/1/2026	\$ 170,625	\$ 180,500
12/1/2026	\$ 68,125	\$ 72,875
6/1/2027	\$ 173,125	\$ 187,875
12/1/2027	\$ 65,500	\$ 70,000
6/1/2028	\$ 175,500	\$ 190,000
12/1/2028	\$ 62,750	\$ 67,000
6/1/2029	\$ 177,750	\$ 192,000
12/1/2029	\$ 59,875	\$ 63,875
6/1/2030	\$ 179,875	\$ 193,875
12/1/2030	\$ 56,875	\$ 60,625
6/1/2031	\$ 186,875	\$ 195,625
12/1/2031	\$ 53,625	\$ 57,250
6/1/2032	\$ 188,625	\$ 202,250
12/1/2032	\$ 50,250	\$ 53,625
6/1/2033	\$ 190,250	\$ 203,625
12/1/2033	\$ 46,750	\$ 49,875
6/1/2034	\$ 196,750	\$ 209,875
12/1/2034	\$ 43,000	\$ 45,875
6/1/2035	\$ 198,000	\$ 210,875
12/1/2035	\$ 39,125	\$ 41,750
6/1/2036	\$ 204,125	\$ 216,750
12/1/2036	\$ 35,000	\$ 37,375
6/1/2037	\$ 205,000	\$ 222,375
12/1/2037	\$ 30,750	\$ 32,750
6/1/2038	\$ 210,750	\$ 227,750
12/1/2038	\$ 26,250	\$ 27,875
6/1/2039	\$ 216,250	\$ 227,875
12/1/2039	\$ 21,500	\$ 22,875
6/1/2040	\$ 221,500	\$ 232,875
12/1/2040	\$ 16,500	\$ 17,625
6/1/2041	\$ 226,500	\$ 242,625
12/1/2041	\$ 11,250	\$ 12,000
6/1/2042	\$ 231,250	\$ 247,000
12/1/2042	\$ 5,750	\$ 6,125
6/1/2043	\$ 235,750	\$ 251,125
Total	\$ 4,828,667.36	\$ 5,161,946.53

Payment Date	Debt Service - Current Interest Rates	Debt Service - Pessimistic Scenario
12/1/2023	\$ 76,045	\$ 80,822
6/1/2024	\$ 215,625	\$ 225,375
12/1/2024	\$ 72,125	\$ 76,750
6/1/2025	\$ 222,125	\$ 231,750
12/1/2025	\$ 68,375	\$ 72,875
6/1/2026	\$ 223,375	\$ 237,875
12/1/2026	\$ 64,500	\$ 68,750
6/1/2027	\$ 224,500	\$ 243,750
12/1/2027	\$ 60,500	\$ 64,375
6/1/2028	\$ 230,500	\$ 244,375
12/1/2028	\$ 56,250	\$ 59,875
6/1/2029	\$ 236,250	\$ 249,875
12/1/2029	\$ 51,750	\$ 55,125
6/1/2030	\$ 241,750	\$ 255,125
12/1/2030	\$ 47,000	\$ 50,125
6/1/2031	\$ 242,000	\$ 260,125
12/1/2031	\$ 42,125	\$ 44,875
6/1/2032	\$ 247,125	\$ 264,875
12/1/2032	\$ 37,000	\$ 39,375
6/1/2033	\$ 252,000	\$ 269,375
12/1/2033	\$ 31,625	\$ 33,625
6/1/2034	\$ 261,625	\$ 278,625
12/1/2034	\$ 25,875	\$ 27,500
6/1/2035	\$ 265,875	\$ 282,500
12/1/2035	\$ 19,875	\$ 21,125
6/1/2036	\$ 269,875	\$ 291,125
12/1/2036	\$ 13,625	\$ 14,375
6/1/2037	\$ 278,625	\$ 294,375
12/1/2037	\$ 7,000	\$ 7,375
6/1/2038	\$ 287,000	\$ 302,375
Total	\$ 4,371,920.14	\$ 4,648,446.53

Payment Date	Debt Service - Current Interest Rates	Debt Service - Pessimistic Scenario
12/1/2023	\$ 78,433	\$ 82,581
6/1/2024	\$ 328,000	\$ 342,125
12/1/2024	\$ 71,750	\$ 75,625
6/1/2025	\$ 331,750	\$ 350,625
12/1/2025	\$ 65,250	\$ 68,750
6/1/2026	\$ 340,250	\$ 358,750
12/1/2026	\$ 58,375	\$ 61,500
6/1/2027	\$ 343,375	\$ 361,500
12/1/2027	\$ 51,250	\$ 54,000
6/1/2028	\$ 351,250	\$ 369,000
12/1/2028	\$ 43,750	\$ 46,125
6/1/2029	\$ 358,750	\$ 381,125
12/1/2029	\$ 35,875	\$ 37,750
6/1/2030	\$ 370,875	\$ 387,750
12/1/2030	\$ 27,500	\$ 29,000
6/1/2031	\$ 377,500	\$ 399,000
12/1/2031	\$ 18,750	\$ 19,750
6/1/2032	\$ 383,750	\$ 404,750
12/1/2032	\$ 9,625	\$ 10,125
6/1/2033	\$ 394,625	\$ 415,125
Total	\$ 4,040,683.33	\$ 4,254,956.25

Note: All figures are estimates. Actual rates are determined on the day of sale.

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated July 2019

Agency	Ecology	
Project Name	Lacey HQ Parking Garage Preservation	
OFM Project Number	40000384	

Contact Information

Name	James Pendowski	
Phone Number	360-407-6829	
Email	jpen461@ecy.wa.gov	

Statistics

Gross Square Feet	47,446	MACC per Square Foot	\$56
Usable Square Feet	N/A	Escalated MACC per Square Foot	\$57
Space Efficiency		A/E Fee Class	C
Construction Type	Parking structures and g	A/E Fee Percentage	10.91%
Remodel	Yes	Projected Life of Asset (Years)	25-30

Additional Project Details

Alternative Public Works Project		Art Requirement Applies	No
Inflation Rate	3.18%	Higher Ed Institution	No
Sales Tax Rate %	9.40%	Location Used for Tax Rate	Lacey
Contingency Rate	10%		
Base Month	July-21		
Project Administered By	DES		

Schedule

Predesign Start		Predesign End	
Design Start	July-21	Design End	March-22
Construction Start	March-22	Construction End	September-22
Construction Duration	6 Months		

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Project Cost Estimate

Total Project	\$3,693,150	Total Project Escalated	\$3,796,568
		Rounded Escalated Total	\$3,797,000

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated July 2019

Agency	Ecology	
Project Name	Lacey HQ Parking Garage Preservation	
OFM Project Number	40000384	

Cost Estimate Summary

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
A/E Basic Design Services	\$218,074		
Extra Services	\$0		
Other Services	\$97,975		
Design Services Contingency	\$31,605		
Consultant Services Subtotal	\$347,654	Consultant Services Subtotal Escalated	\$353,716

Construction			
Construction Contingencies	\$263,353	Construction Contingencies Escalated	\$271,017
Maximum Allowable Construction Cost (MACC)	\$2,633,525	Maximum Allowable Construction Cost (MACC) Escalated	\$2,710,161
Sales Tax	\$272,306	Sales Tax Escalated	\$280,231
Construction Subtotal	\$3,169,184	Construction Subtotal Escalated	\$3,261,409

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
Equipment Subtotal	\$0	Equipment Subtotal Escalated	\$0

Artwork			
Artwork Subtotal	\$0	Artwork Subtotal Escalated	\$0

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
Project Administration Subtotal	\$176,312	Project Administration Subtotal Escalated	\$181,443

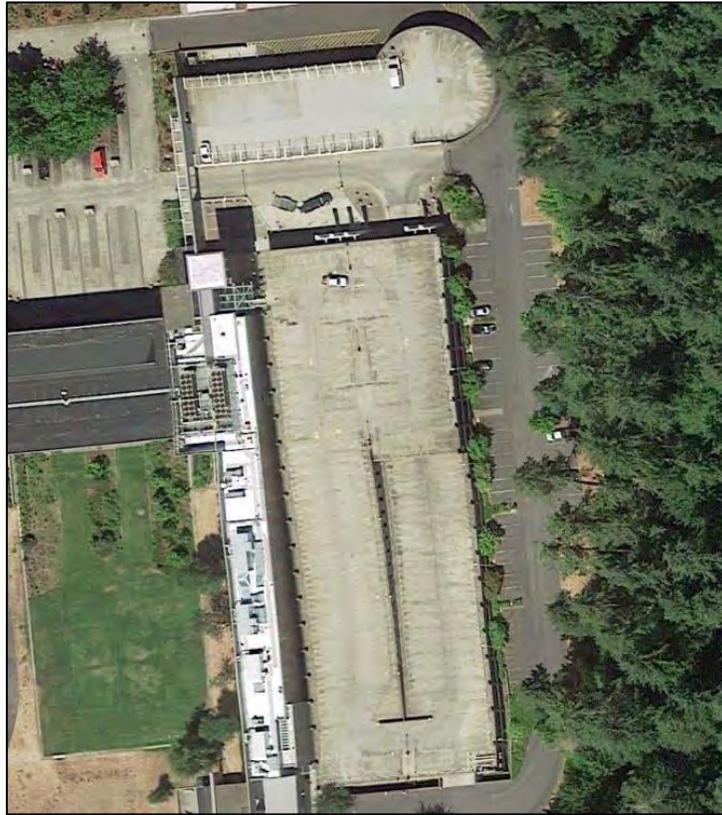
Other Costs			
Other Costs Subtotal	\$0	Other Costs Subtotal Escalated	\$0

Project Cost Estimate			
Total Project	\$3,693,150	Total Project Escalated	\$3,796,568
		Rounded Escalated Total	\$3,797,000

W E T H E R H O L T A N D A S S O C I A T E S , I N C .

CONDITION ASSESSMENT

**Washington State Department of Ecology – Parking Garage
Lacey, Washington**



for

Washington State Department of Ecology
300 Desmond Drive SE
Lacey, Washington 98503

Attn: Steven Adams

October 13, 2020

Observations

The concrete structure appears to be in serviceable condition, with no apparent spalling of the structural double T beams or precast columns. Cracking and delamination of the concrete topping layer was noted, as well as exposed and corroding reinforcing steel elements.

Inward migration of water through the concrete structure elements has resulted in efflorescence on interior surfaces, and corrosion of exposed steel.

The surface condition of the topping slab over the double T beams appears poor in many locations, especially the upper levels. Some areas or panels may have been finished prematurely or cast with a high water/cement ratio at the surface, causing the surface to spall, resulting in an “exposed aggregate” appearance. Other areas have the light broom texture finish normally expected.

A polymer modified topping has been applied to the topping slab on the upper levels, apparently as a repair to the topping slab, as well as to provide additional slope for surface water runoff to the drains. The polymer modified topping depth appears to vary from a shallow edge to approximately 1 inch thick or more. Sounding the polymer modified topping with a hammer suggests widespread delamination, as previously reported by Krazan. In addition, several locations were observed where steel reinforcing components are exposed and corroding.

Sealant joints between the concrete topping panels are weathered and deteriorated, and due for replacement. The edges of the concrete topping panels are raveling at some joints, potentially permitting water to migrate into the joint and lower levels.

Other isolated spalling may be due to inclusions and contamination of the concrete or the use of de-icing compounds during winter. It was indicated by Mr. Adams that a variety of compounds are used to help reduce icing of the traffic surface.

Discussion and Recommendations

To help reduce the inward migration of water through the exposed parking decks and help mitigate corrosion potential to steel reinforcing elements, resurfacing and coating of the exposed upper decks should be considered. Lower levels would also benefit from coating to help limit water migration to steel reinforcing elements, reducing corrosion potential.

While the topping slab condition varies, it is a reasonably good candidate for resurfacing, and coating with a urethane or PMMA traffic coating. Before the entire parking deck area is addressed, a sample area should be identified and a mock-up repair created with the system selected, to verify the effectiveness of the repair, and help refine probable project costs.

Additionally, testing of the existing topping slab concrete condition should be performed, some of which was suggested in the Krazan 2011 report, but may not have been performed (coring and testing for pH profile and compressive strength of the topping slab and double Ts; half-cell corrosion surveys on topping slab and double Ts).

Repair options presented for consideration include (this is not a specification):

Preparation:

1. Removal of the existing polymer modified topping.
2. Grind or shot blast the existing surface to an acceptable profile.
3. Provide temporary support for stairs, fire department standpipe, and perimeter safety railings and raise the bases to allow for cleaning and coating underneath.
4. Removing existing joint sealants, clean joint substrates, apply bond breaker, and fill with a suitable sealant designed for horizontal placement and vehicle traffic service.

New surfacing:

Siplast PMMA traffic coating system for use over unoccupied space:

1. Verify sound concrete is obtained, and finish profile as recommended.
2. Apply moisture tolerant epoxy primer, such as Aquafin SG3 System, or ACTech 2170.
3. Detail cracks and joints as prescribed by material manufacturer.
4. Apply Siplast Pro Color Finish resin with Pro Texture.
5. Apply unreinforced Siplast Terapro VTS System supplemented with Pro Thixo, surfaced with VTS Quartz broadcast into wet resin to refusal.

Potential costs for the work utilizing a PMMA coating system, based on approximately 95,232 square feet of deck area, are estimated to be approximately \$2,271,960 (expected to range from \$23/sf to \$26/sf), including design/estimating contingency fees, O&P, general conditions, and other related costs.

At the time of the coating repairs, miscellaneous concrete repair will need to be performed such as around columns, and at corners.

A contractor capable of performing the work, and who is familiar with this garage deck is Contech Services, contact Roger Runacres, (206) 763-9877, roger@contechserviceswa.com. Other contractors capable of performing the work include Technical Waterproofing, contact Mark Hagerty (206) 768-8324, mhagerty@technicalh2o.com, and Commercial Industrial Roofing (CIR), contact Carrie Green (425) 754-0681, carrie@cir-roofing.com.

An example of a Siplast PMMA deck coating can be observed on the exposed parking garage areas of the Westfield Mall at South Center.

Enclosed are photos taken during our site visit for your review with this report. These images and accompanying notes provide additional information to that presented above and should be considered part of this report.

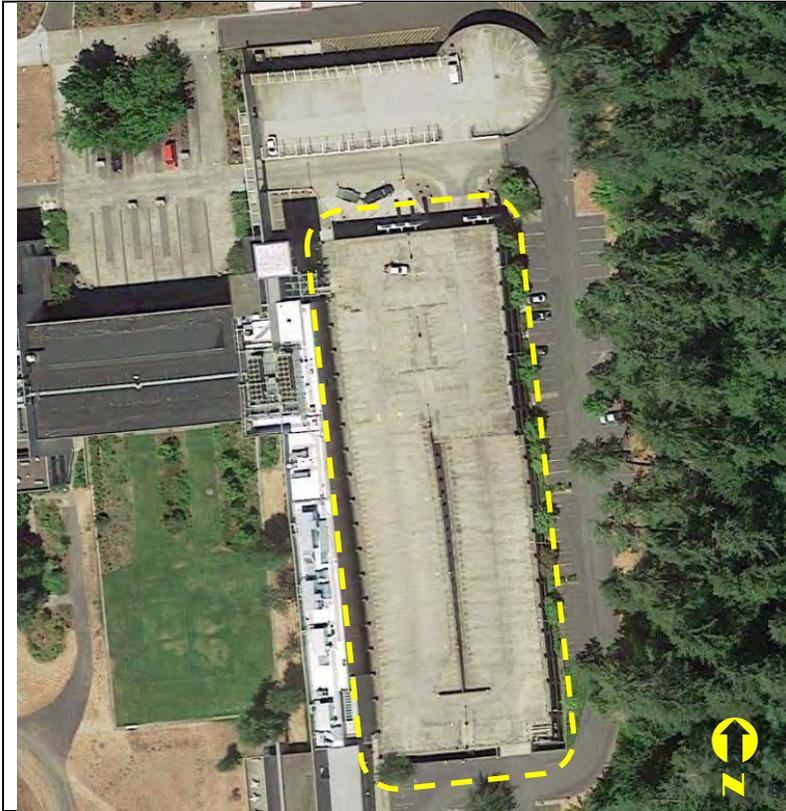
We trust the above information has been of assistance. If you have any questions, or if we may be of further service, please do not hesitate to call.

Respectfully,



Bob Card, F-IIBEC, RRC/RWC/REWC/RBEC/REWO
Senior Field Engineer / Principal
Wetherholt and Associates Inc.

This evaluation is provided at the request of Steven Adams, Washington State Department of Ecology, whom we understand represents the owner. No liability, warranty of merchantability, or guarantee of weatherproofing service life is accepted or implied. Wetherholt and Associates Inc. is a neutral roofing consulting firm specializing in resolving building, waterproofing and roof related issues.



Photograph 1: Overview of the site and Parking Garage layout. (Image courtesy of Google Maps).



Photograph 2: Overview of the main (north) entrance.



Photograph 3: Overview of the south entrance.



Photograph 4: West elevation overview, showing precast columns and beams.



Photograph 5: Overview of the precast double T configuration.



Photograph 6: Detail from previous image showing efflorescence from water migration on the underside of a double T.



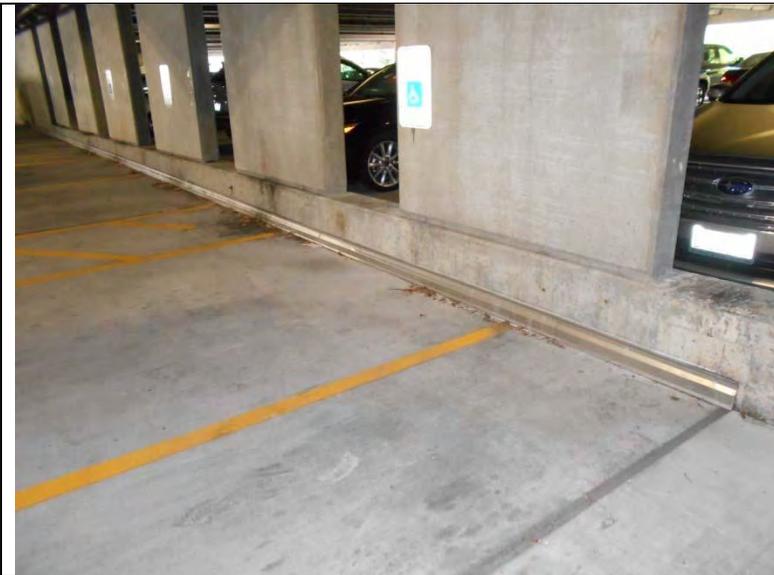
Photograph 7: Mineral deposits on the parking deck surface below the location in the previous image, from water dripping from the double Ts.



Photograph 8: Steel plates installed at the underside of the deck, south end of level 3.



Photograph 9: Detail view from previous image, showing corrosion of the plate. This condition should be addressed at the time of repairs.



Photograph 10: Sheet metal flashing installed at the interior termination of the topping slab, level 1.



Photograph 11: Detail from previous image showing the flashing condition.



Photograph 12: Level 3 overview, showing the western deck area viewed toward the south.



Photograph 13: Level 3 overview, showing the eastern deck area viewed toward the south.



Photograph 14: Detail from photo 12 showing deterioration of the topping layer.



Photograph 15: Typical sealant joint overview.



Photograph 16: Detail from previous image showing deterioration of joint edge.



Photograph 17: Typical sealant joint overview.



Photograph 18: Detail from previous image showing deterioration of joint edge.



Photograph 19: Overview image showing topping layer deterioration, organic growth in divots.



Photograph 20: Exposed and corroding reinforcing steel.



Photograph 21: Exposed and corroding reinforcing steel.



Photograph 22: Typical sealant joint overview.



Photograph 23: Detail from previous image showing deterioration of joint edge and exposed and corroding reinforcing steel.



Photograph 24: Typical sealant joint overview.



Photograph 25: Detail from previous image showing deterioration of joint edge and exposed and corroding reinforcing steel.



Photograph 26: Overview of drain location, level 2.



Photograph 27: Detail from previous image showing accumulation of sediment and debris at drain grate. Regular maintenance should include clearing of debris from drainage pathways.



Photograph 28: Efflorescence and corrosion of steel elements resulting from inward migration of water through concrete structure elements.



Photograph 29: Efflorescence and corrosion of steel conduit resulting from inward migration of water through concrete structure elements.

SUMMARY

Project **WS DOE PARKING GARAGE REPAIR**
 Location Lacey, WA
 Prepared For: Wetherholt & Associates, Inc
 Prepared by J B Iringan Consulting
 Design Phase Budgetary Estimate
 Date September 8, 2020

Items/Divisions	SIPLAST PMMA
Div 2 - Preparation & Demolition	451,932
Div 3 - Concrete	173,300
Div 5 - Metals	-
Div 6 - Wood & Plastics	-
Div 7 - Thermal & Moisture Protection	993,981
Div 8 - Openings	-
Div 9 - Finishes	-
Div 10 - Specialties	96,250
Div 21-23 - Mechanical	-
Div 25-27 - Electrical	-
TOTAL DIRECT COST	\$1,715,463
Gen Conditions incl site Supervision, B&O Taxes & Insurance 12%	205,856
General Contractor's Overhead and Profit (Main office) 8%	144,099
Design/Estimating Contingency 10%	206,542
Add for SIPLAST TESTING FEE (<i>per Wetherholt & Assoc</i>) 1 LS	-
TOTAL REPAIR COST AT TODAY'S BID	\$2,271,960
Total Gross Area, SF	95,232
Unit cost, \$/SF	\$23.86

Notes:

This estimate assumes union wage rate, public bid
 Does not include Sales Tax, Escalation nor Bidding climate Contingency
 Does not include Inefficiency of Labor due to Pandemic (COVID-19) Effect Premium

ESTIMATE DETAIL

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 Location Lacey, WA
 Prepared For: Wetherholt & Associates, Inc
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 Design Phase Budgetary Estimate
 Date September 8, 2020

Items/Descriptions	Quantity	Unit	Unit Cost	Sub-Total	TOTAL
Use of Siplast PMMA					
Div 2 - Misc Slective Demolition & Preparation			9.37		451,932
Strip-off/demo exist polymer modified topping	4,000	SF	1.50	6,000	
Shot blast/roughen/clean exist concrete slab decks	48,236	SF	1.75	84,413	
Grind/clean exist failing sealants/conc in between floor panels	11,790	LF	5.00	58,950	
Chip-back concrete where WWF reinf exposed/corroded	30	LOC	300.00	9,000	
Load, haul & dispose debris	60	CY	120.00	7,219	
Temporary dust protection (tarps/plastics, etc) - allow	68,400	SF	2.00	136,800	
Temporary perimeter safety railings - allow	2,040	LF	20.00	40,800	
Temp supports for stairs, fire dept stand pipe - allow	1	LS	35,000.00	35,000	
Relax raise/retighten base of (E)railings for cleaning/coating underneath	2,550	LF	25.00	63,750	
Floor scan to verify conc floor is sound before surfacing	1	LS	10,000.00	10,000	
Hazmat abatement -	-	NIC		0	
Div 3- Concrete					173,300
New mod polymer topping at north end topmost deck - slope to drain	4,000	SF	8.00	32,000	
Concrete repair/topping where existing WWF reinf were exposed	30	LOC	480.00	14,400	
Clean/coat corroded WWF reinf	30	LOC	300.00	9,000	
Concrete fill/repair in between floor panels	11,790	LF	10.00	117,900	
Div 7- Thermal & Moisture Protection			20.61		993,981
Sealants/backer rod fill/repair in between floor panels	11,790	LF	5.00	58,950	
Sika Siplast Systems: Per Siplast Rep	48,236	SF	16.00	771,776	
<i>Color Finish Resin layer</i>		included above		0	
<i>Surfacing Aggregate</i>		included above		0	
<i>Waterproofing/wearing layer</i>		included above		0	
<i>Primer</i>		included above		0	
<i>VTS non-reinforced system - slope to drain</i>	27,209	SF	6.00	163,255	
<i>Substrate (existing concrete)</i>		Preparation cost in Div 2		0	
Div 10 - Specialties					96,250
Re-striping & numbering parking stalls (2 upper decks only) - allow	500	EA	150.00	75,000	
Stencils signs on HC parking stalls - allow	25	EA	250.00	6,250	
Misc predestrain crosswalk striping - allow	1	LS	5,000.00	5,000	
Temp remove/reinstall precast wheel stoppers - allow	200	EA	50.00	10,000	
TOTAL DIRECT COST				1,715,463	\$1,715,463

September 2, 2020

Department of Ecology
Attn: Steve Adams
Facility Manager, HQ
300 Desmond Drive SE
Lacey, WA 98503

**RE: DOE Parking Garage
Structural Engineering Rapid Assessment
Project No.: A20144.00**

Dear Steve:

On behalf of Sargent Engineers, I am pleased to present to you this memo as our structural assessment of the Washington State Department of Ecology (DOE) Parking Garage located at the DOE headquarters in Lacey, Washington. For this project, our scope of services included the following:

- Performance of a visual assessment of the existing structure. This was completed with your assistance on July 21, 2020.
- Providing this assessment report to include documenting any items of concern in the garage.
- Provide a rough order of magnitude cost estimate for recommended repairs.

Assessment

The main garage is a three-story structure, built of cast-in-place and precast concrete, and structural steel, and is approximately 124-feet wide and 372-feet long constructed around 1993. We performed a similar assessment of the garage in 2007. Please note, the structural, visual, on-site observation does not include any non-structural elements, it also does not include structural members that are concealed, and the observation does not include any checks as to the adequacy of structural members to support the loads placed on them, and does not include any destructive or non-destructive testing. It only includes the condition of those structural members that are readily visible.

Based on information previously reviewed, a small portion at the north end of the first level of the main garage is constructed using structural steel beams and girders with a concrete structural slab. Cast-in-place concrete columns or walls, or structural steel columns support the structural steel floor framing. Based on the structural drawings, some form of "Architectural Fill Slab" is placed over the top of the structural slab in the areas supported on structural steel framing. The remainder of the first floor and all of the second and third floors of the main garage use precast, double-tee beams for the deck support. The tee beams are supported on inverted-Tee shaped precast concrete girders, precast bearing walls, or cast-in-place concrete walls. See Figures 1 through 4 for overall structure photographs.

Based on our quick walk around and through the structure the following items were noted:

- The existing concrete corbel at the south end of the garage supporting the first floor level girder appears to be in good condition with no exterior signs of decay (see Figure 5).
- Hairline longitudinal cracking was also noted in many of the precast tee-beams (see Figure 6) throughout the structure. Some have efflorescence leaching from the cracks.
- At the South end of the main garage an exposed reinforcing bar was noted in the first floor deck. The bar is located at the intersection of one of the East tee beams to the center wall (see Figure 7) just north of the interior wall at Grid 11.5. This bar was noted as being exposed in our 2007 report and does not appear to have changed at all since that time.
- The patch of the concrete deck spall at the South exit ramp has at the East support wall, noted in our 2007 report, appears to be slightly loose of the deck (see Figure 8).
- The numerous precast concrete bearing wall cracks and spalls with exposed rebar at the elevation of the second parking level (see Figures 9, 10, and 11). Many of these were noted in our 2007 report and at least one appears to have been patched and respelled since 2007. The spalls and cracks are still limited to the North ends of the precast walls only. No visible signs of distress were noted at the South ends of these walls, or anywhere else on the walls.
- The concrete deck at the first level near the north entrance has some hairline cracking in the topping slab (see Figure 12).
- Numerous other cracks and spalls were noted throughout the upper decks of the parking garage, especially near and around intermediate columns and walls, and at or adjacent to joints in the deck (see Figures 13 through 15).
- There appears to have been a small fire on the main floor deck at the south end of the garage (see Figure 16). No damage was noted in the garage deck slab or the adjacent wall.
- The concrete deck of the main garage has minor spalls and some exposed reinforcing steel throughout. In numerous areas where the deck is exposed to weathering, the concrete surface is beginning to wear and is exposing more of the aggregate (see Figures 17 through 21).
- Portions of the second and third level decks have been overlaid with a thin overlay. For the most part, the overlay appears to be in good condition (see Figures 22 and 23). However, it was clear that no effort was made to patch and level the concrete deck below before the overlay was placed. As such, water staining could be seen in all of the low spots in the deck.
- Severe spalling and potholing of the deck on the upper level is occurring (see Figure 24).
- The new steel corbel supporting the upper level girder at the north end of the garage is in excellent condition (see Figure 25). However, the girder it is supporting is showing signs of water/moisture damage with cracking throughout the bottom flange of the girders. Much of the cracking has efflorescence and some has rust staining leaching from the cracks (see Figures 26 and 27).
- Other minor spalls and cracks were noted throughout the garage.

Repair and Maintenance Recommendations

The most significant damage noted throughout the structure is in the precast wall panels at the center of the garage, and the upper level deck and supporting girder at the north end of the garage. At this point in time, none of these wall panels showed signs of failure, and it is therefore, our opinion that the damage shown is mostly cosmetic with the exception that the exposed reinforcing needs to be protected from the elements. The upper deck and girder at the north end of the garage are somewhat concerning. It is clear that both are being damaged by water intrusion. The water intrusion on the deck leads to spalls caused by

a combination rusting reinforcing steel and freeze/thaw actions. This eventually leads to the potholes noted in the upper deck. The water intrusion has also become severe enough that in impacting the condition of the girder below. The remaining damage or deficiencies currently noted are typically cosmetic or serviceability issues. However insignificant the current damage is to the items noted above, if they are not properly repaired in the near future, additional deterioration of the steel connections and reinforcing steel could lead to failure of some of these elements.

Therefore, our recommendations, listed in order of highest priority, for repairs are as follows:

- **Precast Wall Panels** – Remove all loose or cracked concrete in the precast, center wall panels, thoroughly clean all exposed reinforcing and coat the exposed reinforcing with a coating of rust converter/inhibitor. Replace the missing concrete with a concrete patching material, some of which offer corrosion inhibitor additives in the mix which would be beneficial to these repairs. Based on the fact that at least one previous repair has already failed, we would also recommend that expansion joint material be placed between the patch and the deck in order to minimize any potential for future movement of the garage deck to once again break off the patch.
- **Third Floor Deck and Girder** – As noted above, the damages to the upper level at the north end of the garage are becoming severe and if left unrepaired could quickly lead to decreased strength in the deck and girder causing partial closures of the garage. The deck in this area needs to be repaired and consideration should be given to extending and/or replacing the thin overlay throughout the upper level of the parking garage. At this point, we do not believe the girder capacity has been impacted enough to warrant decreasing its capacity. However, we would recommend the girder have a follow up inspection after the repairs and weatherproofing of the deck are completed. Following that inspection, additional condition inspections of this girder should probably be made every two years to ensure its condition is not continuing to decline.
- **Remaining Spalls and Cracks** – The remaining spalls and crack throughout the garage may be cleaned and patched on an as-needed basis. If these spalls and cracks are in structural elements, then their continued degradation could lead to exposed reinforcing steel which could eventually to a decreased structural capacity and possibly failure. The hairline cracks in many of the structural concrete members are typically too small to be treated with epoxy injection, and will therefore be left as is. The hairline cracks pose no threat to the structural integrity of the garage.

Conclusions

Overall, we feel the existing structure is in fair condition based on the visible structure elements we observed on site. However, a few life safety items need to be addressed immediately as noted above, most important of which is repairing the upper level decking and waterproofing the deck at the north end of the garage. There is also a lot of maintenance and the possibility of an expensive roof structure replacement, or building replacement depending upon cost-benefit ratios, if the weatherproofing elements of the building are not repaired and maintained. Our opinion of probably costs for the recommended structural repairs (rough order of magnitude) is \$98,000. Please see attached Opinion of Probable Construction Costs below. This repair work would include repairing the concrete spalls in the upper deck in preparation for the new waterproofing, and spall repairs for the center precast walls. Recommendations for the waterproofing of the deck are outside of our area of expertise, so we would recommend reaching out to another consultant for input on waterproofing.

Thank you for this opportunity to be of assistance to you. Please feel free to call or email with any questions or comments, or if we can be of any additional assistance.

Respectfully,
Sargent Engineers, Inc.

Erik Martin, P.E., S.E.
Principal

ECM/encl.

C:\Users\erikm\Desktop\20Files\A20144.00 Ecology Garage Assessment\DOE Garage Obs Memo.docx

OPINION OF PROBABLY CONSTRUCTION COSTS

For: Washington State Department of Ecology

Date Prepared: 09/02/2020

Description	Quantity	Units	Unit Cost	Total Cost
Structure Repairs and Asset Preservation				
Upper Deck Spall Repair	500	SF	\$ 125.00	\$ 62,500.00
Center Wall Spall Repair	30	SF	\$ 300.00	\$ 9,000.00
			Subtotal =	\$ 71,500.00
General Conditions and Profit				
Mobilization	1	LS	7%	\$ 5,005.00
Temp Facilities	1	LS	1%	\$ 715.00
Site Overhead	1	LS	8%	\$ 5,720.00
Home Office Overhead and Profit	1	LS	8%	\$ 5,720.00
Bonds, Insurance, Business Taxes	1	LS	3%	\$ 2,145.00
Design Contingency	1	LS	10%	\$ 7,150.00
			Probable Construction Cost =	\$ 97,955.00
			Rounded Construction Cost =	\$ 98,000.00

Note: The above estimate does not include design, contract administration, permitting, testing or special inspection services, or sales tax.



Figure 1 - View from East



Figure 2 - View from South



Figure 3 - View from Southeast

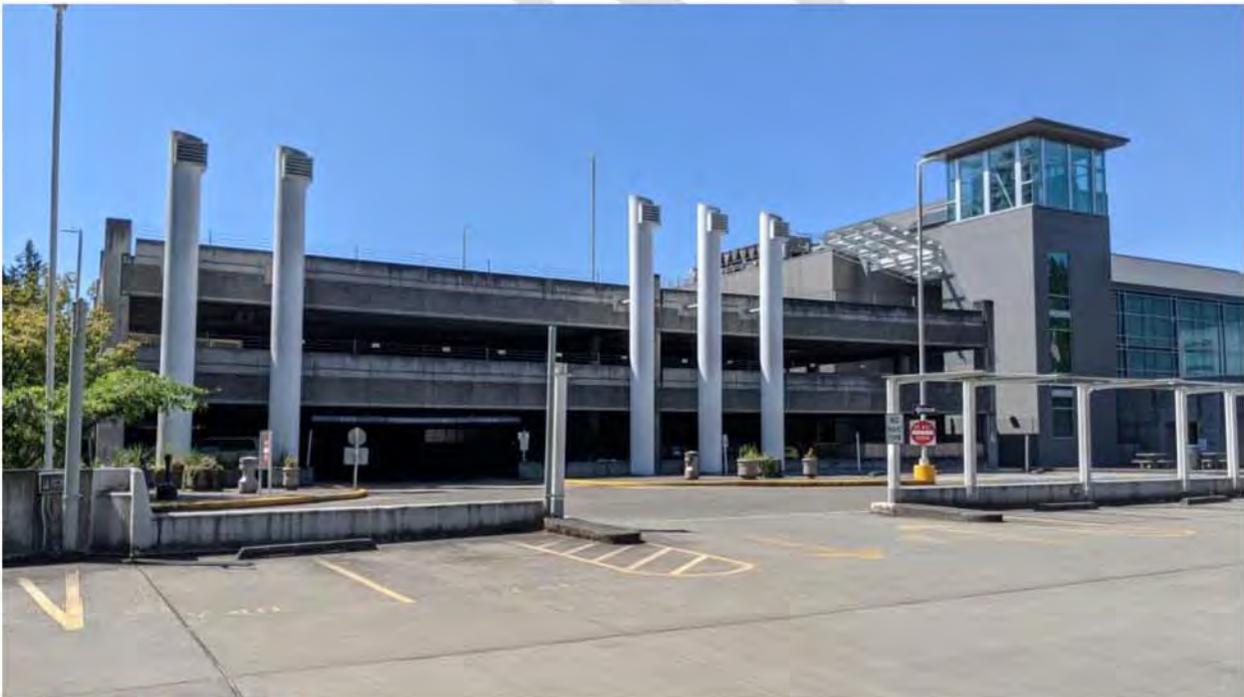


Figure 4 - View from North



Figure 5 - First Floor Corbel - South End of Garage



Typical Hairline Cracking

Figure 6 - Typical Hairline Cracking in Double-Tee Beams

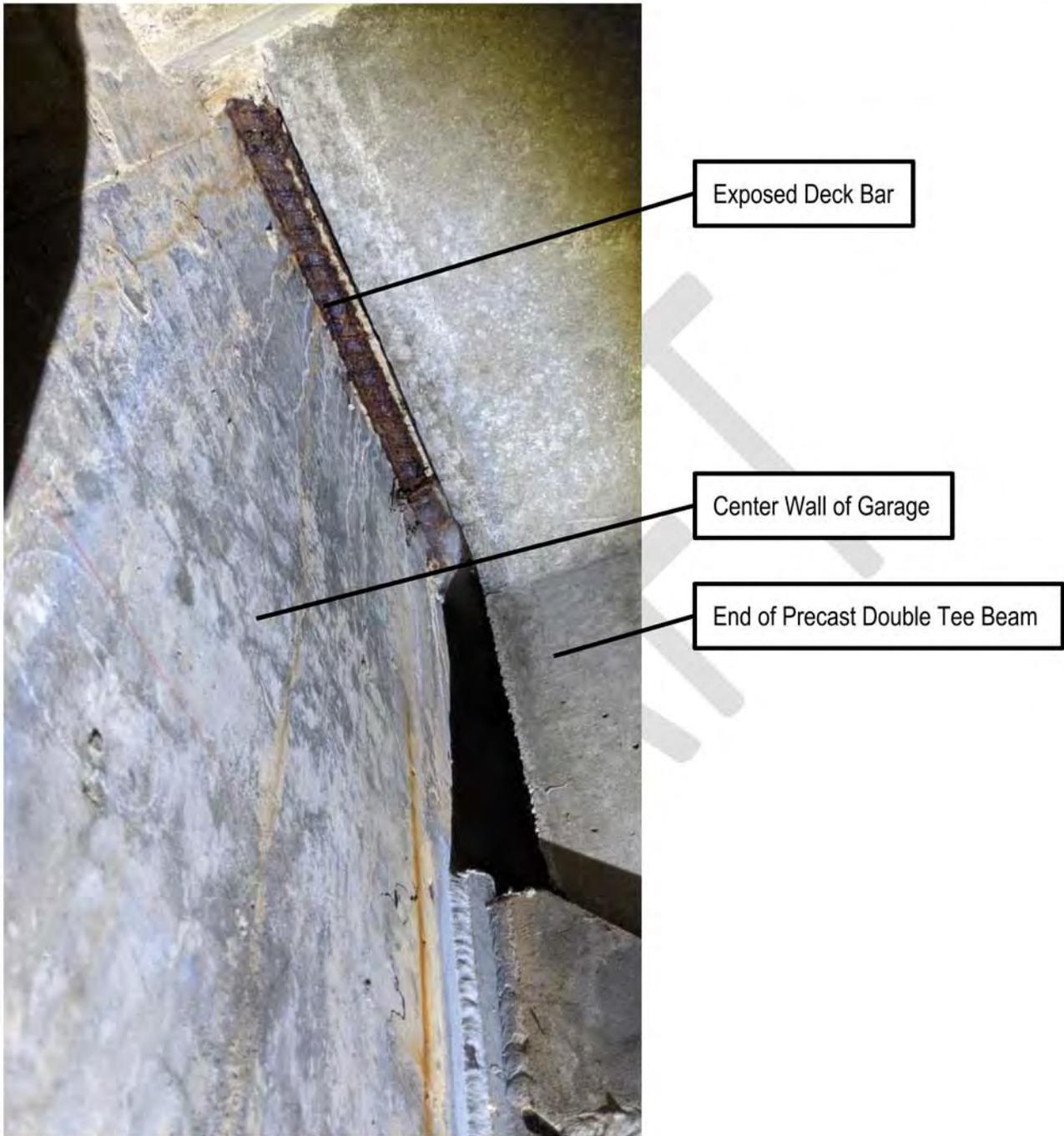


Figure 7 - Exposed Deck Bar - First Floor Deck



Figure 8 - Patch at East Side of South Exit Ramp



Figure 9 - Center Wall Spall (appears to have been patched and re-spalled)



Figure 10 - Center Wall Minor Spalling



Figure 11 - Center Wall Diagonal Crack



Figure 12 - Deck Cracking at North Entry



Figure 13 - Deck Crack at Intermediate Joint



Figure 14 - Deck Cracking at Columns



Figure 15 - Deck Cracking at Walls



Figure 16 - Possible Fire Staining - First Floor Near South Entrance/Exit



Figure 17 - Minor Spalls in Deck



Figure 18 - Minor Deck Spall with Exposed Reinforcing



Figure 19 - Exposed, Rusty Reinforcing and Deck Aggregate Exposure



Figure 20 - Deck Spalling and Aggregate Exposure



Figure 21 - Deck Aggregate Exposure



Figure 22 - Upper Level Overlay (Overview)



Figure 23 - Water Stained Low Spots in Overlay



Figure 24 - Cracking, Spalling and Potholes in Upper Level Deck



Figure 25 - New North Corbel Supporting Upper Level Girder



Figure 26 - Severe Cracking with Efflorescence and Rust Staining - Upper Level Girder



Figure 27 - Severe Cracking with Efflorescence and Rust Staining - Upper Level Girder



Figure 28 - Cracking, Spalling and Potholes in Upper Level Deck



Figure 29 - Cracking, Spalling and Potholes in Upper Level Deck

Project : CLEAN, SEAL & REPAIR PARKING GARAGE & VISITOR PARKING

Architect: KMB architects

Estimated By: KMB architects

Design Phase: Budgetary Cost Estimate

Date: September 2, 2020

ITEMS DESCRIPTION

SUMMARY		PARKING GARAGE	VISITOR PARKING	TOTAL COST
Division 2 - Site Preparation		65,500	26,950	65,500
Division 3 - Concrete		6,500	7,000	6,500
Division 4 - no work		0	0	0
Division 5 - no work		0	0	0
Division 6 - no work		0	0	0
Division 7 - Thermal & Moisture Protection		50,400	24,080	50,400
Division 8 - no work		0	0	0
Division 9 - no work		0	0	0
Division - 10, 11, 12, 13 & 14 - no work		0	0	0
Division 21 to 27 - no work		0	0	0
Division 33 - Exterior Improvements		9,000	9,000	9,000
Total Direct Cost	\$ -	\$ 131,400	\$ 67,030	\$ 198,430
General Conditions and site overhead	15%	- 19,710	10,055	29,765
Overhead and Profit (Main office)	10%	- 15,111	7,708	22,819
Design/Estimating Contingency	5%	- 8,311	4,240	12,551
TOTAL COST @ TODAY'S BID	\$ -	\$ 174,532	\$ 89,033	\$ 263,565

Project : **CLEAN, SEAL & REPAIR PARKING GARAGE & VISITOR PARKING** for Dept of Ecology HQ
 Lacey, WA
 Architect: KMB architects
 Estimator : KMB architects
 Design Phase: Budgetary Cost Estimate
 Date: September 2, 2020

ITEMS DESCRIPTION	Quantity	Unit	Unit Cost	Sub-Total	TOTAL
Parking Garage					
Division 2 - Site Preparation					65,500
Pressure wash/clean existing exterior precast/concrete walls	18,000	SF	2.25	40,500	
Equipment rental allowance - for 2 months	1	LS	25,000	25,000	
Division 3 - Concrete					6,500
Repair concrete spals	1	LS	6,500	6,500	
Divisions 4 - 6					0
No work	0	LS	0.00	0	
Division 7 - Thermal & Moisture Protection					50,400
Apply sealer to exist precast/concrete exterior walls	18,000	SF	2.80	50,400	
Divisions 8 - 27					0
No work	0	EA	0.00	0	
Division 33 - Exterior Improvements					9,000
Protect existing plantings/trees at work area	1	LS	5,000	5,000	
Repair damaged plantings: grass/groundcovers - allow	1	EA	4,000	4,000	
TOTAL DIRECT COST				131,400 \$	131,400

Project : **CLEAN, SEAL & REPAIR PARKING GARAGE & VISITOR PARKING for Dept of Ecology HQ**
 Lacey, WA
 Architect: KMB architects
 Estimator : KMB architects
 Design Phase: Budgetary Cost Estimate
 Date: September 2, 2020

ITEMS DESCRIPTION	Quantity	Unit	Unit Cost	Sub-Total	TOTAL
Visitor Parking					
Division 2 - Site Preparation					26,950
Pressure wash/clean existing exterior precast/concrete walls	8,600	SF	2.25	19,350	
Remove/clean existing sealants between precast/concrete joints	4,000	LF	1.90	7,600	
Division 3 - Concrete					7,000
Repair concrete spals	1	LS	7,000	7,000	
Division 4 & 5 & 6					0
No work	0	LS	0.00	0	
Division 7 - Thermal & Moisture Protection					24,080
Apply sealer to exist precast/concrete exterior walls	8,600	SF	2.80	24,080	
Division 8 & 9					0
No work	0	EA	0.00	0	
Division 21 to 27 - Mechanical & Electrical					0
No work	0	EA	0.00	0	
Division 33 - Exterior Improvements					9,000
Protect existing plantings/trees at work area	1	LS	5,000	5,000	
Repair damaged plantings: grass/groundcovers - allow	1	EA	4,000	4,000	
TOTAL DIRECT COST				67,030 \$	67,030