



**I-5 ROSE QUARTER**  
IMPROVEMENT PROJECT

**Chapter 2**

# Diversity and Subcontracting Plan

**30% Early Work Package A and B**



30% Design Phase  
Submittal Milestone  
**RECONCILED**

I-5 Rose Quarter  
Improvement Project

January 13, 2022

## Chapter 2: Rose Quarter Diversity and Subcontracting Plan

This Diversity and Subcontracting Plan is developed to address all elements outlined in and comply with the requirements of the CMGC contract, including CMGC144, Exhibit C, and 49 CFR Part 26. In implementing this plan HSJV does not exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by this part on the basis of race, color, sex, or national origin.

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### HSJV Commitment and Philosophy

Hamilton/Sundt, A Joint Venture (HSJV) is committed to restorative justice on the I-5 Rose Quarter Improvement Project by expanding the Disadvantaged Business Enterprise (DBE) contracting community, and building a diverse, skilled workforce. Although this project will not be able to restore lost wealth, it can help restore diverse businesses and workforce to a level of understanding and competency that has historically been kept from them. It can help ensure their ability to effectively compete in the future and empower a workforce with the necessary skills to effectively compete in the open market and will remove barriers. This plan

is aligned with and incorporates the guiding principles developed by the Community Oversight and Advisory Committee (COAC) as well as HSJV consisting of the following:

1. Build the capacity of minority businesses for current and future projects;
2. Build capacity in local underrepresented populations to meet local construction workforce needs;
3. Further minority businesses' expertise to be successful with project subcontracting opportunities;
4. Assist firms with the certification process for Disadvantage Business Enterprise (DBE) as needed;
5. Provide technical assistance for DBE firms with core construction and business best practices;
6. Work closely with workforce providers to increase access for underrepresented local populations;
7. Work closely with workforce providers to increase skill development through more culturally competent advocacy, mentorship and workforce retention programs;
8. Provide new opportunities and facilitate new relationships between minority subcontractors and prime contractors;
9. Maximize opportunities at all levels of the project for local minorities;
10. Enhance the relationships between ODOT/City of Portland and the local minority business community; and
11. Constitute a DBE/On-the-Job Training (OJT) Advisory Committee of local community members to provide recommendations DBE/OJT project development.

The HSJV executive providing oversight to the project diversity team is Jeff Moreland, who has been a community leader and advocate for people of color in N/NE Portland for over 35 years. Jeff is the president of Raimore Construction, a mid-sized African American owned and certified DBE company, with one of the most diverse workforces in the state of Oregon. The overall responsibility and management of the DBE and OJT program will be led by Bill Bruce, HSJV diversity coordinator. As the diversity coordinator for this project, Bill brings over 25 years of CMGC experience and demonstrated success with achieving unprecedented results for Disadvantaged Business contractors and diverse workforce inclusion on major Portland infrastructure projects. The team will also include Jennifer Erickson and Judy Betts. Both Jennifer and Judy have a strong track record in supporting diversity on major local construction projects. All members of the Diversity Team, regardless by whom they are employed, represent the HSJV not their individual companies. This team will work as a seamless group fully supported by all HSJV management to achieve the goals and objectives outlined in this plan. The purpose of this plan is to describe processes to achieve overall project goals, not individual roles and responsibilities. This plan is designed to benefit the overall underrepresented community. The Albina neighborhood has been historically disadvantaged and adversely effected by the construction of Interstate 5, injustices as a result of local public and private policy, and programs that led to new infrastructure and developments, displacement, gentrification, redlining and more – including Legacy Emanuel Medical Center, the Portland Rose Garden, Veterans Memorial Coliseum, and urban renewal.

Additionally, HSJV is committed to working in partnership with COAC in establishing the approach to maximizing diversity on the project. We are aware that the individual members are highly experienced in many aspects regarding diversity, DBE contracting, and workforce development. All parties involved, HSJV, the COAC, and ODOT share the same goals for the project. HSJV anticipates an ongoing collaboration with the COAC comprised of both monthly

meetings, as well as informal discussions throughout the project. The HSJV will always be accessible to the COAC members to answer questions and address concerns as they come up.

The HSJV is committed to the project goals for DBE contracting, as well as workforce diversity and apprenticeship utilization listed in more detail in the following pages of this plan. The HSJV management is committed to supporting the diversity coordinator with all required resources and management support to achieve the project goals.

This plan is not intended to be a final version of the Diversity and Subcontracting Plan, as it will be continuously updated throughout the duration of the project, based on current design, estimated costs, and other variables.

This Diversity and Subcontracting plan entails HSJV's approach to the following elements:

1. Utilization of Certification Office for Business Inclusion and Diversity (COBID) Certified DBE's - **Subpart A**
2. OJT / apprenticeship compliance activities- **Subpart B**
3. Workforce- **Subpart C**

The Diversity and Subcontracting Plan includes all legally permissible outreach, Good Faith Efforts, and other measures included in the HSJV plan. Individual goals for DBE contracting, workforce diversity, and apprenticeship utilization are listed within the appropriate subparts to the plan referenced below (Subparts A, B, and C). The HSJV considers all the listed goals within this plan to be minimum goals, and in all cases, we commit to either meeting or exceeding these goals.

HSJV will meet all State and Federal requirements regarding subcontracting on the Project

*End of Section*

# The Diversity and Subcontracting Plan

## Subpart A: Subcontracting

HSJV is committed to meeting or exceeding the ODOT DBE project goal range of 18% to 22%. The HSJV recognizes ODOT will determine the DBE contract goals for each Early Work Package (EWP), Main Construction Package, and other amendment or change orders that roll-up to the overall aggregate 18 to 22% Project goal. ODOT will set all DBE goals for which the HSJV will apply race conscious goals, and/or use race neutral measures, as applicable, to individual package(s) in accordance with ODOT goal setting requirements.

HSJV will utilize the ODOT Project DBE database in addition to the COBID directory of certified firms for tracking DBE firm's location, availability, and business capacity as part of Good Faith Effort to engage DBEs and maximize opportunities. Tracking will be done on an Excel spreadsheet. The COBID directory will be used by HSJV to identify DBE firms whose participation on a contract may be counted toward achievement of the assigned DBE contract goal.

Pursuant to 49 CFR Part 26.53 in relevant part, the HSJV, and all subcontractors with contracts with DBE goals, will implement all Good Faith Efforts during the entire life of the contract to meet the assigned DBE contract goal for each Early Work Amendment, the Main Construction Package, or other amendment or change orders. Good Faith Efforts shall be made in accordance with federal regulations to secure sufficient DBE opportunities to meet the assigned DBE contract goals. The HSJV, and all subcontractors with contracts that include DBE goals, shall also make every reasonable effort during the course of the project to enable DBE firms to perform those portions of the contract work for which they have been committed.

The HSJV, and all subcontractors with contracts that include DBE goals, shall make Good Faith Efforts to replace with another DBE, a DBE who is unable or unwilling to perform, unable to perform a commercially useful function, or has changed its ownership and/or control. The HSJV, and all subcontractors with contracts that include DBE goals, shall implement all Good Faith Effort procedures, including, but not limited to, following procedures for terminating a committed DBE and replacing the firm with a substitute DBE, all in accordance with Exhibit C-5 of the CMGC contract.

The long project duration creates a unique opportunity for capacity building. Capacity building will take the following three forms:

1. Identification of work types where there is currently a lack of DBE contractors capable or willing to perform that type of work. HSJV will help identify contractors who have the prerequisite skills to add new types of work but have never been given an opportunity to add these new types of work in a practical way. We will work closely aiding the DBE firms with understanding scope, risk assessment, and technical assistance to encourage firms to pursue new types of work. HSJV will provide practical opportunities, skill, capacity and mentorship on the project to help develop the firm's skills and capabilities to successfully perform the new types of work.
2. Expansion of existing DBE contractors into larger scopes of work by progressing opportunities over the duration of project. This will help smaller firms reduce business and construction risk associated with scaling by providing increased opportunities as they build capacity and gain efficiencies.
3. Use the Mini-Construction Manager/General Contractor (MCMGC) opportunities to help firms develop the ability to become prime contractors. We will work closely with selected firms and help assess their strengths and weaknesses. We will provide

mentorship and technical assistance to help them understand which systems they need to build-out and corporate governance necessary to help them scale into a prime contractor, and capacity strategies to provide mentorship and guidance to successfully grow their firms into sustainable and profitable businesses.

By identifying the capacity building scopes early, we can proactively provide outreach, mentoring, and technical assistance during the pre-construction services phase. Our team understands the historic barriers and challenges that have prevented some DBE firms from participating on ODOT projects because we have extensive experience successfully working with DBEs. The most common barriers are:

1. **Barrier:** Ineffective outreach and the lack of early education about project opportunities

**Potential Solution:** Host informational meetings, utilize the Greensheet tool to prescribe targeted solicitation, work with membership groups to organize DBE firms certified by COBID with current work in preparation for the I-5 Rose Quarter Improvement Project. Additional information of these topics is included below in Subpart A of this Plan.

2. **Barrier:** Lack of cultural competency with both prime contractor and agency staff.

**Potential Solution:** Collaborate with the entire Project Team to add diversity in the project staff as opportunities to hire new staff are presented. Implement project orientation for all employees and project stakeholders including cultural competency and harassment-free work environment training, giving agency feedback on cultural issues and how to address them in a more appropriate and effective way.

3. **Barrier:** Excessive paperwork requirements and lack of back-office support.

**Potential Solution:** Collaborate with Project Team to explore ways to consolidate or reduce excessive paperwork requirements. Utilize targeted technical assistance (as described in greater detail under technical assistance) and project-based mentorship to help firms understand paperwork requirements and thereby become more proficient at processing the necessary paperwork.

4. **Barrier:** Slow pay and the cash flow constraints for small firms

**Potential Solution:** Develop innovative streamlined progress quantification, billing, and payment schedules. Negotiate subcontracts with terms unique to the needs of each individual firm (i.e., fast and accurate pay for work performed). Allow contractors to frontload mobilization elements. The CMGC contract has some flexibility regarding retainage requirements. Assist subcontractors in identifying compensable changes in the work.

5. **Barrier:** Lack of trust between the community and ODOT. There is inherent distrust between the community and ODOT due to past performance and the negative impacts experienced by the community due to the original I-5 construction.

**Potential Solution:** Help the contracting community understand the significance/importance of ODOT using the CMGC delivery method. Conduct transparent and open communication with the community informing them of the ODOT/HSJV commitments on this project. Utilize community advocacy membership groups, advisory and accountability groups to not only hold the HSJV, but also ODOT, accountable throughout the project and to promote a successful project including significant DBE opportunities.

All of these proposed solutions are discussed in further detail within the following pages of this plan.

Due to our understanding of historic barriers and challenges, our team is very well positioned to help create successful outcomes on this project through advocacy and targeted technical assistance. Advocacy is helping to ensure that every DBE, large or small, is aware of what it takes to become successful at winning and completing work. Success means the following:

- They were profitable;
- Increased overall understanding and skills;
- Gained valuable experience that better prepares them for future opportunities on this and future projects;
- Improved their corporate infrastructure including systems and governance.

Diversity Coordinator Bill Bruce and Jennifer Erickson will hold quarterly meetings with each subcontractor, reviewing the above stated measures to ensure success.

#### **Real Life Example of Success with Mentorship and Advocacy:**

In 2006, on the Downtown Bus Mall Light Rail Expansion Project, Jean Mallory of Affordable Electric was hired as part of the tenant improvement for the project offices. His scope of work was worth \$100k, and he self-performed the work with his own hands. With this early small success, we then worked together to package a ductbank scope that ultimately grew Jean's contract to over \$3 million, the largest contract he had ever had, allowing him to hire additional hands and develop a back office. Fast forward to today and Affordable Electric has performed work on almost every light rail project in the region, has 20 full time electricians, and a six person staff. This is a form of mentor/protégé that is project based and has produced the same type of results many times over.

The HSJV team will provide educational opportunities to firms during pre-construction services and throughout the construction phase. The team will utilize Minority Membership Groups and larger DBE contractors to help facilitate and expand these mentoring relationships. The HSJV team will provide opportunities for hands-on technical assistance, to help DBE contractors prepare for construction during pre-construction activities. It should be noted; outreach, advocacy, mentorship, and technical assistance should start as early as possible during the pre-construction services phase. An early start will better prepare firms for the construction phase (especially regarding Early Work Packages), ensuring better overall success on the project.

Although not listed in the three main areas of capacity building, it is important to create opportunities to develop new DBE firms from within the community, and expand the capacities of existing firms with the addition of new NAICS or commodity codes. There are several past examples of DBE contractors who have never performed public works projects because of the historic barriers that are described above. Often these firms are right in the community experiencing the largest impact from a project. This Diversity Plan will always look for opportunities to engage companies and individuals and offer them opportunity, along with assistance in gaining certification.



**Often the best way to build capacity is to go beyond the improvement of existing businesses to supporting the creation of new businesses:**

Through the use of technical assistance, mentoring and DBE tiers working together, in 1999, The Northeast Urban Trucking Consortium was created to serve the Interstate Max Light Rail Project. James Posey was the catalyst behind the Northeast Urban Trucking Consortium. Posey believed that a consortium would provide numerous benefits to truckers, and to the Northeast community. “It would be a way”, he said, “to genuinely empower minority businesses to work together and to empower themselves to be more efficient so that they could be competitive in the market.” The concept worked for many years providing millions in contract value and allowing the organization to give back to the community through many means.

Contractors and businesses without ODOT public works experience, will be informed about opportunities on the project. Our team will identify the above-mentioned firms early, guide them through the certification process, and will provide the necessary mentorship and technical assistance to match them with opportunities through three phases of work, preparation, execution, and close out.

### Identifying Subcontracting Opportunities through the Greensheet Tool

The primary tool our team uses to refine our overall strategy to identify subcontracting opportunities and availability is through a construction cost estimate that we refer to as a Greensheet tool. The Greensheet tool is a summary of the cost estimate identifying individual items of work. This methodology has been implemented successfully on many past projects.

<i>Subcontracting Opportunities with Greensheet tool</i>			<i>Past Success Using Greensheet tool</i>		
<b>Input</b>	<b>Greensheet</b>	<b>Output</b>	<b>Project</b>	<b>Project Value (in millions)</b>	<b>DBE Utilization</b>
<ul style="list-style-type: none"> <li>Project work scopes</li> <li>Available COBID DBE firms</li> </ul>	<ul style="list-style-type: none"> <li>DBE opportunities</li> <li>DBE capacity</li> <li>New scopes for existing DBEs</li> </ul>	<ul style="list-style-type: none"> <li>Bid packages maximizing DBE opportunities</li> <li>Non-DBE opportunities</li> </ul>	Interstate MAX CM/GC (1999-2002)	\$105	27%
			Portland Transit Mall / I-205 (2006-2009)	\$158	25%
			Portland Milwaukie West (2011-2015)	\$103	35%
			Division Transit Project (in progress)	\$75	80%

*\* Graphics are for illustrative purposes only.*

The Greensheet tool is used to identify opportunities available to all subcontractors, so they may realize the maximum opportunities through the project (see Appendix A for an illustration of the Greensheet process). The Greensheet tool is our central plan for achieving goals, DBE contracting, capacity building, and workforce development. Detailed construction activities and a schedule of values allows us to implement the following strategies:

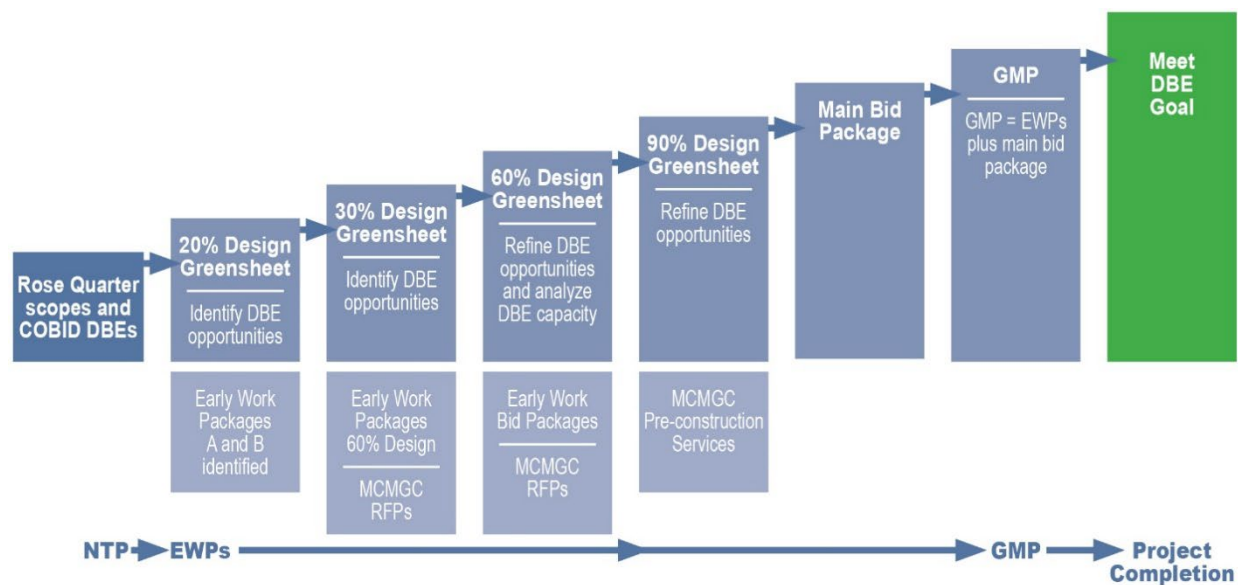
- Evaluate existing DBE capacity and match existing DBEs with the appropriate scopes of work;
- Make determinations related to division of scopes and how best to package or break down those scopes to encourage DBEs to bid;
- Identify logical areas for capacity building; and
- Develop a refined technical assistance approach to better meet the needs of the DBE contractors.



The Greensheet tool is the road map (or predictor) and will be continually reviewed and refined during the pre-construction/estimating process. We will identify firms in the pre-construction process to help prepare those firms for construction opportunities. During this process, we will evaluate the firm’s strengths and weaknesses to better define and target technical assistance. The Greensheet tool is utilized in estimating total percentages of anticipated DBE opportunities early in the project and is also valuable in identifying areas for capacity building and MCMGC opportunities. For each design milestone, the Greensheet tool is updated, thus creating real opportunities. Once connected with the project schedule, and other elements of our DBE approach, broader opportunities will be realized. If at any time during the duration of the project it is determined that HSJV or subcontractors have fallen behind on anticipated performance related to the project goals, a recovery plan will be generated. The recovery plan will:

- Be customized to the specific issue;
- Contain a timeline for resolution;
- Seek input from COAC/OR/ODOT; and
- Monitor the results of the recovery plan on a monthly basis.

*Updating DBE opportunities at each submittal with Greensheet tool*



*\* Graphics are for illustrative purposes only.*

## Strategies to Increase Utilization of DBEs on the Project

### Capacity Building

The Greensheet tool is also critical in identifying capacity building opportunities. Refer to Appendix A for an illustration of a Greensheet DBE capacity building analysis. This is achieved by examining the complete estimate in relationship with the schedule and evaluating it to the existing capacity in the DBE contracting community.

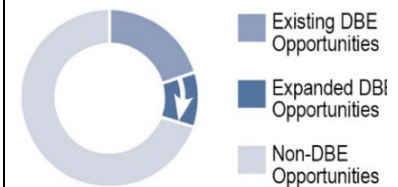
The Greensheet tool helps identify scopes where DBE capacity building is possible and ensures maximum DBE opportunities. This is further explained in the following paragraph. The tool allows the team to focus their efforts on scopes that have the greatest potential.

The Greensheet tool can also be utilized to track disparities by work type and North American Industry Classification System (NAICS) codes in different types of work (e.g., deck concrete, reinforcing, structure concrete, sawcut texturing, and architectural treatments). In the Greensheet tool, the appropriate NAICS codes can be listed for those scopes and then matched with COBID-certified DBEs in those same codes.

The anticipated outcomes for capacity building through this technique include:

- Early identification of scopes, as early as the 20% design;
- Development of targeted outreach to develop interest in these scopes;
- Development of targeted technical assistance to aid interested firms in preparation for the scopes identified;
- Identification of current work on any other projects that could be utilized to give advance experience to firms for targeted scopes.

*Expanded DBE Opportunities with Greensheet tool*



### **Real Life Example of Capacity Building using the Greensheet:**

*The Interstate Max project identifies opportunities, then builds capacity for sustained work for Raimore Construction. In 1999, I-Business Solutions collaborates with Northeast Urban Trucking Consortium. Between 2001 and 2006 I-Business Solutions evolves into a small civil contractor called Raimore Construction.*

*In 2006, a capacity building opportunity is identified in the brick flatwork scope of work on the Downtown Bus Mall Light Rail Project – Raimore Construction develops the expertise for brick flatwork and performs \$2.5M scope.*

*In 2011, a capacity building opportunity is identified in MSE wall construction on the Portland Milwaukie Light Rail Project – Raimore Construction develops the expertise for MSE wall construction and performs \$7M scope.*

*Between 2014 and 2017 Raimore develops into a DBE Prime Contractor on a series of \$3M - \$7M projects, and today is the CMGC on the \$70M Division Transit Project.*

### Strategies for Subcontractor Outreach

The HSJV team assembled for this project is intrinsically tied to the Albina community. Our team’s deep-rooted ties with stakeholders, minority membership groups, and businesses throughout the corridor will be essential in achieving successful outcomes on the project. Our team will use proven outreach strategies to build community awareness and maximize DBE opportunities and workforce diversity, wherever possible. To provide awareness and education about upcoming project opportunities, outreach strategies include:

- Mixers in the community;
- Conducting Open Houses, up to 10 DBE outreach events;
- Engaging with Neighborhood Associations;
- Developing Plan Rooms;
- Share complete solicitation packages with interested DBE community;
- Hold pre-bid meetings;
- Partnering with Local, Diverse Organizations;

- One-on-One Interaction;
- Engagement with Pre-apprenticeship Programs;
- Continuous, Open, and Meaningful Communication;
- Engagement with Local Outreach/DBE Coordinators; and
- Track DBE firms interested in bidding.

Outreach will begin once this plan is approved by ODOT.

Our team will employ our strategies for outreach in an equitable and transparent manner and seek input to this end.

HSJV will gain support for this diversity plan through focused outreach. The outreach efforts will include regular presentations through all phases of the project with consistent content to all diverse membership groups and trade organizations in the Portland area. It will be important to have increased outreach in the pre-construction phase of the project to increase awareness and identify potential DBE firms interested in bidding on the project. Our Project Team will meet with other community organizations and stakeholders to deliver a consistent message and to foster open communication.

Strategies employed to foster competition will include:

- Crafting solicitation documents to be simple and inviting;
- Engaging firms that are new to ODOT projects. More detail is provided below regarding availability and capacity; and
- Showing courtesy to prospective bidders throughout all phases of procurement.

As on typical projects, we will host voluntary pre-bid meetings to be conducted for each subcontract package to assure prospective bidders understand relevant project information and solicitation requirements. At the pre-bid meetings, scope opportunities will be discussed in great detail and prospective bidders will have opportunities to ask questions. Bidders will receive written information and instructions and be offered direction and technical assistance in creating responsive bids. Additionally, HSJV will communicate the importance of the requirement that all subcontractors meet project DBE and workforce diversity goals.

This Subcontracting Plan is written in accordance with ORS 279C.337(3).

#### Identifying DBE Availability and Capacity

It will be necessary to identify capability, capacity, and availability of the firms that are interested in the project. However, this process is not intended or designed to exclude any interested firm. This evaluation is done by careful examination of DBE firms' current capabilities, current commitments, backlog and ability to build capacity.

Criteria to be analyzed by HSJV will include:

- Experience on past projects;
- Experience of the owner and key employees;
- Diversity of workforce;
- Safety record;
- Financial statement;
- Active COBID Certification;
- Work Type/NAICS Codes.

We generally work closely with the DBE firms independently, but often use membership organizations to help determine if the existing DBE firm currently possesses the prerequisite skills, systems, infrastructure, and financial wherewithal to take on a particular scope of work. We also use this time to evaluate the DBE's ability to scale and if so, at what level. It is

at this point that we offer tailored technical assistance to better prepare the firm for the targeted opportunity. This process has a two-fold effect:

1. Better ensures the DBE will be successful not only on the I-5 RQ but future projects as well; and
2. Reducing overall project risk that has often been attributed to DBE under performance.

For example, firms who have never done ODOT work, firms along the alignment, and firms who have no past project experience all need an opportunity to get started, and these opportunities need to be given equitable attention with the opportunities afforded to the regular performing DBE contractors. HSJV's analysis will determine the size and scope each firm is invited to propose on, which is not to limit but ensure success. Considering the long duration of this project, firms will have multiple opportunities to participate as they successfully complete scopes.

When this is done correctly the DBE firms grow by gaining understanding, skills, systems, equipment, experience, and confidence. The project benefits as it gains a diverse subcontracting community with the necessary skills to successfully bid and complete work. The community wins as it gains more competent contractors who need less support in the future and who better represent the actual community.

#### **HSJV Approach for Determining Procurement Methods**

In collaboration and with ODOT approval, HSJV will utilize five types of procurement for all scopes of work. They are described as Low Bid with Qualifications, Best Value, Mini CMGC (MCMGC), HSJV Self-Perform, and Direct Solicitation.

Low Bid with Qualifications, Best Value, and MCMGC will all be publicly advertised in accordance with OAR137-049-0690(5), and are deemed to be competitive in nature. There is no limit to the pool of applicants for these three types of procurement.

Although we will stress the need for competitive pricing, price will only be one of the evaluation criteria.

Examples of scopes of work to be procured through each methodology is shown below:

Low Bid with Qualifications	Best Value	MCMGC	HSJV Self-Perform	Direct Solicitation
Traffic Control	Traffic Control	Traffic Control	Traffic Control	Any Scope
Earthwork	Electrical	Electrical	Erosion Control	
Demolition	Earthwork	Earthwork	Survey	
Micropile Fdn	Erosion Control	Erosion Control	Drainage	
Temp Shoring	Drainage	Survey	Bridges	
Drilled Shaft Fdn	Survey	Demolition	Pile Driving	
Reinforcing	Demolition	Drainage	Retaining Walls	
Fire Life Safety	Reinforcing	Retaining Walls	Concrete Paving	
Asphalt Paving	Coating/Paint	Sound Walls	Concrete Flatwork	
Pavement Marking	Retaining Walls	Agg Base		
Utility Relocates	Asphalt Paving	Asphalt Paving		
	Sound Walls	Concrete Flatwork		
	Agg Base	Traffic Signals		
	Concrete Walks	Street Car		
	Signing	Landscape		
	ITS	Site Lighting		
	Water Quality			
	Landscape			

The same scopes are in multiple procurements. Like scopes will be divided up based on schedule, geography, complexity, and size. HSJV management will coordinate all subcontractors on the project, including those performing the same trades, at different times and locations on the project.

The table below, depicts the characteristics of each type of procurement:

CHARACTERISTIC	Best Value	LOW BID with Qualifications	Direct Solicitation	MCMGC	HSJV Self-Perform
Goal	Best value, focusing on price, diversity metrics, and availability	Lowest price. Price and qualifications can also be utilized in methodology	Procure desired subcontractor	Select and mentor a small business firm to manage multiple trades under a single subcontract	Self-Perform the items of work that most directly affect schedule, safety, quality, and other various components of the project tailored towards desired project goals
Cost evaluation process	Costs in proposals are part of the cumulative total score	Costs are compared to HSJV estimate, Independent Estimate, and qualified Proposers	Costs are compared to HSJV estimate, and Independent Estimate	Costs in proposals are part of the cumulative total score	HSJV estimate is compared to ODOT Independent Estimate
Best and Final Offer (BAFO)	Yes	Yes	Yes	Yes	NA
Informal	Yes	Yes	Yes	Yes	NA
Formal	Yes	No	No	Yes	NA
Award basis	Based on overall scoring of proposal	Criteria weighted heavy on price, lowest responsive proposer for price, and other criteria shown in scorecard	Based on overall scoring of proposal	Based on overall scoring of proposal	Quantity and Cost Reconciliation
Responses evaluated by	Informal evaluation committee	Informal evaluation committee	Informal evaluation committee	Formal evaluation committee with several participants	HSJV to provide written justification per Article 9 CMGC contract for self-perform in excess 30% of the work
Open-Book*	No	No	Yes	No	Yes

\* Open-Book process per CMGC Article 6.5, 6.6 and CMGC 141

\* Best and Final Offer, formal process will be used as needed and will entail all proposers resubmitting the request for proposal

\* Best and Final informal is used to true up and align all of the proposals received for a particular solicitation

Best Value and Low Bid with Qualifications will all be publicly advertised to open market, in accordance with OAR137-049-0690(5), and are deemed to be competitive in nature.

Direct Solicitation is not advertised and is deemed non-competitive, and subject to the Open Book Process per CMGC Article 6.5, 6.6, and CMGC141.

### Procurement of the MCM/GC

The MCM/GC will be selected through a two- part process, consistent with Exhibit C-10 and CMGC144.25.

Step one will consist of a publicly advertised request for a Statement of Interest from prospective MCM/GC’s who must be qualified as a Small Business Concern per 15 U.S.C.632. Upon receipt of each Statement of Interest, HSJV will perform an assessment of the proposed firm’s capabilities per CMGC144.25. At the conclusion of Step one, HSJV will prepare a list of proposed firms along with results of assessments for each proposed firm to ODOT for review and feedback. Once HSJV has reviewed ODOT feedback, step two will commence.

Step two will consist of issuance of a Best Value based Request for Proposal (RFP) to a list of approved proposers which will be evaluated to determine the selected firm.

Regarding MCMGC, as indicated in the above table, the selection of each MCMGC firm to participate in Pre-Construction services is defined as competitive. However, once on-board, and if approved, each amendment for construction services will be subject to the Open-Book process per Article 6.5,6.6 and CMGC 141.

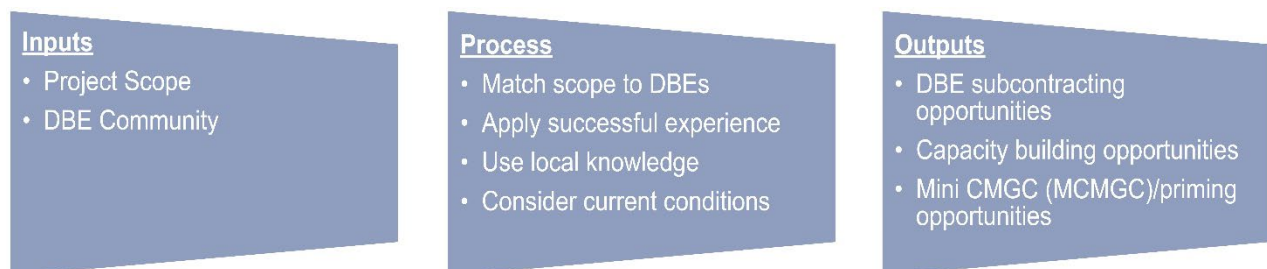
HSJV self-perform is not advertised and is deemed non-competitive, and subject to the Open Book Process per CMGC Article 6.5, 6.6, and CMGC141.

The methodology utilized in the Oregon market that has achieved unprecedented results that was pioneered on past TriMet projects utilized a Greensheet tool. HSJV will look for DBE opportunities for every scope regardless of size and a Best Value procurement method, requiring competition among small business firms, will be incorporated in scopes. Best Value procurement includes a Request for Proposal (RFP) where the work involved requires an innovative approach to diversity, subcontracting, experience, and expertise. Use of this method allows us to focus on the same project values that were utilized to select the HSJV.



As the design progresses, and the various scopes become more refined, the Greensheet tool will further illustrate how to better define bid packages and how to target outreach efforts.

#### Greensheet Process



This is directly tied to the efforts outlined in the above sections:

- Capacity Building;
- Strategies for DBE Outreach; and
- Identifying DBE Availability and Capacity.



Request for Proposals (RFPs) will be developed for all selection methods on a scope-by-scope basis. When it makes sense, HSJV will develop methods of direct solicitation to DBEs and other small businesses, targeted solicitations to three or more DBEs and firms, and elevated solicitation to three to five DBE and other Firms. Firms must be COBID certified by the specified bid date in order to count DBE participation towards the DBE goal.

*Sample Scorecard depicting criteria and weighting of Categories for all Subcontract Procurement types described in the table above*

Price Evaluation	XX%
Qualifications	XX%
Construction Approach	XX%
Diversity of Workforce	XX%
Key Personnel and Major Subcontractors	XX%
Total	100%

The RFPs will be developed to match each procurement scope and type, each scorecard criteria will be reviewed with ODOT and shared with potential proposers in the bidding documents.

Anticipated DBE subcontracting areas include, but are not limited to the following:

Saw-cutting	Striping	Signage
Paving	Trucking	Fencing
Demolition	Concrete Placement	Utilities
Material Supply	Survey	Professional Services
Mechanical	Electrical and Site Lighting	Signals
Fiber Optic	Communications	Rebar
Miscellaneous Metal	Structural Steel	Landscaping
Miscellaneous Supply	Disposal	Clearing and Grubbing
Security	Low Voltage Work	MCMGC

*\* Values will be determined at each design milestone estimate.*

Most of these subcontracting areas are relatively standard to public works projects. Use of the Best Value procurement method combined with the use of the Greensheet Tool to predict, forecast, and plan are the most successful means to maximizing DBE opportunities. Additionally, development of MCMGC scopes allows even greater expansion and opportunity for growth within the DBE and small business community.

Additional details related to subcontract ranges, procurement methods, solicitation contents, documentation of solicitations, and advertisement will be developed at each estimating and design milestone for both early work packages and the overall total project. See Bid Package Graphic above describing subcontract ranges and the 20% Greensheet Appendix B. The project schedule defines the associated timeline for this progression.

### **MCMGC Program, Identification of MCMGC Opportunities**

The HSJV has identified scopes with the most potential for MCMGC opportunities. Further analysis will come from the Greensheet tool described above. To date, we have identified four areas that could contain between four to six MCMGC opportunities. The scopes listed

below are large packages stretching over a long duration which provide greater DBE opportunities, larger contract values, and larger workforce potential, which all help to attain the overall project objectives.

- Streetscape: Streetscape creates the greatest opportunity for availability because there is currently a substantial amount of DBE firms who perform this type of work, providing a significant amount of DBE coverage in this area. HSJV anticipates breaking the streetscape scope into several MCMGC packages.
- Clackamas Crossing: This scope of work provides an opportunity to develop a MCMGC bridge builder and ample opportunities associated with bridge finishes and substructure work.
- Bridge Widening: This work entails constructing additional width to existing bridges along the corridor as design dictates.
- Retaining Walls: Based on our analysis of the preliminary project schedule, there are many retaining walls that are not schedule critical and could provide MCMGC opportunities.

HSJV's single major subcontractor, Raimore Construction, will not be subject to competitive selection. Raimore will be a MCMGC and will be performing a streetscape scope of work. HSJV will submit a written justification for this selection per project specifications.

Through project-based mentorship, the HSJV team will provide the following to potential MCMGCs:

- Firm Evaluation/Capacity Building: Through a series of one-on-one meetings, assist in evaluating a firm's current capacity and provide a projection of future capacity building opportunities to aid in matching them with future opportunities.
- Technical Assistance Pairing: Firms will be matched with technical assistance as described throughout this plan, to help build out their construction and back-office systems and processes.
- Estimating support: Software training will be provided to ensure adequate take-offs and detailed estimating. Conduct formal estimate reviews with DBEs and small businesses to minimize scope gaps. Mentor on production method best practices to facilitate an accurate estimate.
- Leverage Relationships: Assist firms in gaining access/negotiate better pricing for equipment and materials.
- Foster Collaboration/Partnerships by creating a networking environment for DBE firms to increase capacity.

### Other Considerations:

All MCMGCs will be procured utilizing the Best Value process outlined above in this plan. All MCMGCs will be required to:

- A. Self-perform a minimum of 30% of the work;
- B. Subcontract specific portions of their own work to lower tier DBE companies; and
- C. Meet all project workforce diversity goals.

HSJV will work closely with MCMGCs to provide educational opportunities in the following processes:

- Advertising and soliciting subcontractors
- Distribution of plans, specs, and bid documents for scopes they are bidding out
- Receiving and analyzing sub-tier quotes
- Review and comprehension of plans, specs, and bidding documents
- Safety

- Quality
- Developing negotiation skills
- Issuing/managing subcontracts
- Onboarding subcontractors on project requirements - submittals, billing, insurance, Buy America, monthly reporting and other required paperwork

### Real Life Example of MCMGC:

Currently on the Division Transit Project there are two separate MCMGC contracts underway. The Greensheet was utilized early in this CM/GC project to identify the capacity for one of the three project segments to be performed by a MCMGC, a \$10M value subcontract. Additionally, a Park and Ride facility was also perfectly suited for a MCMGC scope, a \$2M value. Qualified firms were evaluated through the methods described above. Two firms were selected to compete. Both were provided training on the RFP and Preconstruction Services processes in the role of a prime contractor. Both companies competed for both scopes. The number one rated firm was awarded the largest scope and the number two rated firm was awarded the smaller scope. Both firms are approximately 50% complete today, and perfectly poised to compete for similar opportunities on the Rose Quarter Improvement Project.

The MCMGC concept has been utilized in the Portland region since 2006. For those DBEs that have grown their capacity to the level that can withstand the requirements of this program the program is well known and understood. There are already approximately six DBEs in the Portland region that have expressed interest in this project, with an additional three to six firms that have the potential to develop themselves in the next two years, depending on the results of other work opportunities. HSJV will continue to disseminate information related to the MCMGC program in conjunction with the Owner’s Rep (OR) consultant and ODOT and the guidance of the Diversity Plan and project schedule.

### Providing Technical Assistance

In keeping with project values, technical assistance is being provided to all subcontractors by HSJV to aid and serve restorative justice. HSJV will provide technical assistance limited to educational services, which will not compromise a firm's commercial useful function. The desired outcome is uplifting firms that have been historically discriminated against and bringing them to a level to compete in the open market. All technical assistance will be customized to each firm, as one size does not fit all.

- Technical assistance is open to all subcontractors (assessment based)
- Available to both small and DBE firms
- Emphasize DBEs that have a meaningful effect on Workforce - strongly encourage an inclusive and diverse workforce throughout all subcontracts

Technical Assistance is provided by HSHV at all stages of the Project:



DBE firms have expressed interest in technical assistance to promote growth and accomplish the following:

- Expand project portfolio;
- Expand staff capabilities;
- Utilize new technologies;
- Improve finances;
- Improve operations; and
- Assist with certification process.

Pre-Proposal technical assistance will be provided to prospective proposing subcontractors.

Goals associated with the pre-proposal assistance are:

- Establish deep understanding of diversity requirements for the project - Workforce and Subcontracting, Cultural Competency and Acceptable Workforce Program;
- Bid Packaging & Scope Review;
- Plans & Specs Review;
- Understanding Backlog;
- RFP Responses & Estimating; and
- Software training

#### Technical Assistance during Onboarding Process

Once a subcontractor is awarded a package, the onboarding process will be initiated. Technical assistance will be administered per the following, in a culturally appropriate manner:

- HSJV staff will meet with the subcontractor and assess the current state of the subcontractor's operations;
- The assessment will include the evaluation of the following skillsets:
  - Estimating and Change Order Management
  - Staff & Workforce
  - Bonding & Insurance
  - Cash & Lines of Credit
  - Safety
  - Compliance Reporting
  - Cultural Competency and Harassment Free Workplace Training

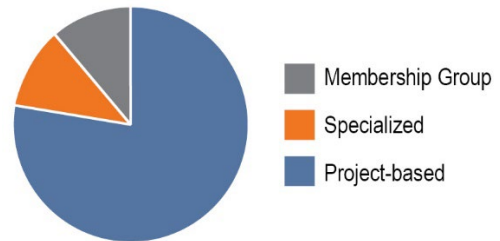
#### Specialized Technical Assistance

- If specialized technical assistance is needed, HSJV will engage a professional with construction experience. (Example areas: financial management, book and record keeping, taxes, insurance, bonding, and access to capital).
- HSJV may set up additional meetings with membership advocacy groups to help with this assessment process.
- Utilizing the HSJV expertise, we will determine the scope of technical support and start mentorship protocols.
- HSJV will continue to work with minority membership training groups to develop and participate in their general training sessions offered to members.

## Tailored Technical Assistance

Three types of tailored technical assistance are anticipated:

1. Involvement of Membership Organizations (Advocacy Groups)
2. Specialized Technical Support (Professional Services)
3. Project-based Assistance (HSJV)



<b>1</b>	<b>Involvement of Membership Organizations (Advocacy Groups)</b>							
	<ul style="list-style-type: none"> <li>• Advocacy</li> <li>• Training &amp; Services</li> <li>• Networking</li> <li>• Information</li> </ul>	<p>Advocacy groups include:</p> <table border="1" style="margin-left: 20px;"> <tr> <td>PBDG</td> <td>LatinoBuilt</td> </tr> <tr> <td>NAMC</td> <td>OAME</td> </tr> <tr> <td>MCIP</td> <td>Minority Chambers</td> </tr> </table>	PBDG	LatinoBuilt	NAMC	OAME	MCIP	Minority Chambers
PBDG	LatinoBuilt							
NAMC	OAME							
MCIP	Minority Chambers							

<b>2</b>	<b>Specialized Technical Support (Professional Services)</b>	
	<ul style="list-style-type: none"> <li>• Financial Management</li> <li>• Book &amp; Record Keeping</li> <li>• Taxes</li> <li>• Insurance</li> <li>• Bonding</li> <li>• Access to Capital</li> </ul>	

<b>3</b>	<b>Project-based Assistance (HSJV)</b>	
	<p>Project-based assistance represents the largest share, and will involve engagement of many HSJV staff members. There will be three areas of focus:</p> <ol style="list-style-type: none"> <li>1. Field-based operations assistance will be led by the HSJV superintendents.</li> <li>2. Back-office assistance will be led by the HSJV outreach coordinator.</li> <li>3. Project Management and Diversity Assistance will be led by the HSJV diversity manager.</li> </ol>	

The HSJV Diversity Team will hold quarterly meetings with each subcontractor receiving technical assistance, to assess effectiveness of the training and growth of management

personnel. If required, revisions to technical assistance will be initiated throughout the project to achieve overall goals. Technical assistance will be critical to achieving the desired outcomes for the I-5 Rose Quarter Improvement Project and to help DBE entrepreneurs and small businesses grow. The overarching goal is to prepare firms for sustainable success and growth for their business on this project and in the future.

#### Anticipated Outcomes from the Technical Assistance Program

The overall goal is to prepare firms for sustainable success and growth for this project and future projects.

Success metrics include:

- Sustained backlog and profitability
- Improved operations
- Expand project portfolios of firms
- Expand staff capabilities of firms
- Utilize new technologies
- Improve finances
- Assist with Certification Process

#### **Kickoff Meetings**

Kickoff meetings will be utilized to establish compliance requirements for the Diversity Plan at the following times:

- Pre-bid solicitations;
- Subcontractor onboarding;
- MCMGC onboarding; and
- Key intervals throughout the project duration.

Kickoff meetings are intended to create a deep understanding of project goals and requirements among all the project participants.

#### **On-Site workforce Affirmative Action Requirements**

On-Site Workforce Affirmative Action Requirements for Women and Minorities will be incorporated into all subcontracts more than \$10,000. These requirements include the Requirements for Affirmative Action to Ensure Equal Employment Opportunity.

#### **Equal Employment Opportunity (EEO)**

Matt O'Connell, HSJV Project Manager, will be the EEO Officer. Matt will be responsible for the management, promotion and compliance of HSJV's EEO Program, which will include:

- Proper dissemination of policies;
- EEO training and regular meetings regarding the policies;
- Diverse recruitment and hiring, including reasonable accommodation;
- Management of personnel actions in line with EEO guidelines;
- Management of training and promotion in line with EEO guidelines;
- Diverse selection of subcontractors, suppliers, and leasing of equipment;
- Compliance with records and reporting; and
- Inclusion of all subcontractors and suppliers.

#### **Resolution of Procurement Protests**

The HSJV protest resolution process will be included in the solicitation and be reviewed in all pre-bid meetings, and is as follows. HSJV will allow five business days for written protests,



after notice of award is issued to the successful subcontractor. A written justification is required from the protesting subcontractor to comply with this process. HSJV will apprise ODOT in writing of the protest. HSJV will evaluate and respond to written protest within five days. HSJV, with the concurrence of ODOT will make final subcontractor selection based on outcome/resolution of protest and provide written notice to all bidders.

### **Subcontractor Discussions, Questions, and Answers during Bids**

HSJV will utilize a web-based system called SharePoint, which will allow subcontractors to submit questions and requests during bid solicitations. During outreach and solicitation, HSJV will provide training regarding access and functionality of this widely used software. There will be no costs to potential bidders to access this system. HSJV will respond and post answers in a timely fashion from receipt of original question.

### **Notification of Successful Firms**

Per ORS 279C.337(3)(d), HSJV will announce subcontractors it has selected to perform services via email within two business days of making selection. All proposers, as well as ODOT will receive this notification, indicating the successful proposer.

### **Unsuccessful Bidders**

HSJV will hold a debrief for any unsuccessful firm upon request. The debrief meeting will be held within ten days of request receipt.

### **Timing for notices, responses, and other actions for relating to a procurement**

Time frames for actions related to procurement will be customized based on the scope, complexity, and magnitude of each bid package. HSJV will submit each solicitation to ODOT for approval, specific details will be included in the solicitation documents and discussed at pre-bid meetings.

The minimum time allowed for proposers to respond to any solicitation will be three weeks.

### **Subcontracting Plan (added elements)**

#### *Economic Conditions Affecting Subcontracting*

It is anticipated the Rose Quarter Improvement Project will be competing for subcontractor availability with other large construction projects in the Portland metro area. There are several large projects coming to the area. They include Burnside Bridge, I-205 widening, Willamette Water Supply Treatment Plant, and Bull Run Water Treatment Plant/Pipeline.

Strategies to mitigate subcontractor availability include:

- Start Early: HSJV anticipates issuing solicitation packages before these other projects begin. This will enable us to get subcontractors on board early so they become vested in the project approach. Once on board at a large project with a long duration, they stay engaged.
- Prime Contractor of Choice: Members of the HSJV have a long history of working with the subcontracting community in the Portland area. Our philosophy has been to maintain positive relationships, manage projects in a proactive manner, treat subcontractors with respect, and maintain fair payment terms. Due to these factors, many subcontractors prefer HSJV as a general contractor. They often choose to bid our projects before looking to other prime contractors to fill their backlog.
- Attractive Subcontract Scopes/MCMGC: The intent is to craft attractive, desirable packages for subcontractors. HSJV will create larger packages that will be more desirable for subcontractors with higher capacity, firms looking to increase in size can



expect MCMGC packages, which will enable them to achieve desired growth in annual revenues.

- Small scopes to maximize opportunities: HSJV will solicit many small scopes to widen opportunities in the project or encourage sub-tier contracting and partnerships.

Establishing a pool of subcontractors early in the project will be a key strategy. HSJV will utilize the COBID list, an internally generated list, as well as the Greensheet Tool to connect potential subcontractors to scopes of work. These lists will be continuously updated throughout the life of the project. As stated above, experience has shown that after winning an initial package, existing subcontractors are usually successful in obtaining additional scopes as they are developed, and ready for bidding.

#### Subcontractor Onboarding

Once a subcontractor is awarded a package, onboarding processes will be initiated within thirty days.

The HSJV Diversity Team will meet with all subcontractors on the project to assess the current state of their operations, workforce diversity, and knowledge regarding compliance reporting requirements. Based on those experiences and skills, Bill and Jennifer will conduct one-on-one training with the subcontractor's management.

After careful consideration, if additional specialized training is required, HSJV will engage a professional with construction experience.

#### Subcontractor Accountability

In addition to those listed above, all provisions of the Prime Contract regarding subcontracting will be included in every subcontract issued by HSJV. Thus, all subcontractors at every tier participating in the project have the responsibility to meet all contractual requirements, including those listed in this plan. HSJV will monitor subcontractor performance monthly to ensure compliance with all contractual requirements.

The HSJV team has been collaborating with the OR/ODOT team since the Notice to Proceed for the project. We will continue this effort moving forward. Diversity Coordinator Bill Bruce will develop and implement the following items in collaboration with the OR/ODOT consultant:

- Prepare the draft and final Diversity Plan in collaboration with Project Manager Matt O'Connell;
- Co-develop outreach materials, participation in pre-bid meetings and outreach activities;
- Organize DBE/OJT sub team meetings;
- Develop DBE and workforce related progress reports;
- Identify COBID certified DBE subcontracting opportunities, qualified DBE's, availability, and capacity;
- Consult with OR /ODOT on post subcontract award technical assistance regarding:
  - Plan reading
  - Take offs and estimating
  - Project scheduling
  - Back-office equipment leasing
  - Diesel emissions compliance
  - Workforce diversity
  - Apprenticeship;

- Collaborate and co-develop with the Agency the DBE outreach materials that include, but are not limited to, Project DBE presentations that provide Project overview and process for working as a DBE with the Contractor;
- Collaborate in the sharing of the DBE presentation at public meetings, as needed;
- Consult with the Agency to finalize, submit and approve the project Diversity and Subcontracting Plan as well as other contract documents; and
- Collaborate with both ODOT and COAC on DBE and workforce.

The HSJV Diversity Manager will continually monitor that all subcontracting activities and administration described above in this Plan are conducted in accordance with ORS 279C.337(3), OAR 137-049-0690(5), CMGC141, CMGC144 and Article 9 of the CMGC contract. For more information regarding OAS 279C.337(3) see paragraph above, entitled Notification of Successful bidders.

*End of Section*

## Subpart B: Increase Apprenticeship Opportunities - Growing a Diverse Workforce

Apprenticeship opportunities are available to any interested individual, however, it is anticipated that all underrepresented communities will gain significant benefits from the project, including those neighborhoods who have been historically disadvantaged and adversely affected by the original construction of Interstate 5, injustices as a result of local public and private policy and programs that led to new infrastructure and developments, displacement, gentrification, redlining and more including Legacy Emanuel Medical Center, the Portland Rose Garden, Veterans Memorial Coliseum, and urban renewal.

There are two main working components of the Apprenticeship Development Plan:

1. Workforce Advocate
  - A means to produce better results towards the recruitment and retention of youth from underrepresented communities
2. Greensheet Tool
  - Assessment Tool (opportunity predictor)
  - Most current milestone estimate

In the case of apprenticeship development, the HSJV team will utilize the Workforce Advocate position as a means to achieve better results towards the recruitment and retention of youth from the Albina Community.

The role of the Workforce Advocate is best described as:

1. A means to produce better results towards the recruitment and retention of the Black, Indigenous, People of Color (BIPOC); and
2. Management of the four avenues for employment
  - Direct Hire
  - Pre-Apprenticeship
  - Apprenticeship
  - Middle-Management Internship and Educational program

An emphasis will be placed on recruitment and retention of employees.

The Greensheet tool described and demonstrated above is the tool that compliments accomplishing this task. Refer to Appendix A, B and C for more details.

A summary of the 20% Estimate Greensheet Tool workforce hours by craft, Appendix B is shown below:

*Total Estimate Craft Hours - approximately 1.4M hours*

Workforce Craft	Estimated Hours
Laborers	441,000
Operators	320,000
Carpenters	280,000
Truck Drivers	135,000
Ironworkers	104,000
Electricians	48,000
Concrete Finishers	46,000
Pile Bucks	18,000

## Project Goals

HSJV recognizes and is fully committed to the recruitment, retention, and promotion of historically and economically disadvantaged, underserved, or underrepresented people, who are interested in careers in the construction industry.

Working with Subcontractors	<ul style="list-style-type: none"> <li>• Minimum of 20% registered apprentice hours for all contracts over \$100k:             <ul style="list-style-type: none"> <li>○ Operators' minimum of 15%</li> <li>○ Goals are Mandatory and are regularly achieved</li> </ul> </li> <li>• Individualized workforce hiring plan for each subcontractor as they are selected.</li> <li>• Utilizing Greensheet to factor in existing employees:             <ul style="list-style-type: none"> <li>○ 20% Design Gap Analysis</li> <li>○ Preliminary Projected Hiring Needs are known</li> </ul> </li> </ul>
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Our commitment to Workforce Apprenticeship as summarized above, is all employers with cumulative contracts of \$100,000 or more shall employ state registered apprentices' twenty percent (20%) of all covered work trades except Operating Engineer, which shall be fifteen percent (15%). HSJV shall encourage all employers to utilize apprentices at all levels of contract value and to the full extent and within apprenticeship ratios and shall be worked by BOLI registered apprentices or federally registered apprentices.

When referencing the data included in Appendix A, we can predict the number of apprentices required. An example scope of work entails 19,568 work hours planned over a 6-month duration, predicting the need of approximately five apprentices based on the anticipated apprenticeship factor applied to estimated work hours. The project schedule will indicate timeframe, month, and year.

Overall apprenticeship numbers for sample case of 19,568 work hours:

Trade	Number Required
Carpenter	2
Laborer	0-1
Operator	0-1
Electrician	0-1
Iron Worker	2

Because of the size and duration of the project, it is not enough to simply have a goal of 20% apprentice utilization; you must have a method to predict the numbers and the timeframe. As subcontractors are selected the tool must also factor in existing employees including apprentices. All of these factors have to be combined and analyzed in order to predict demand and set the appropriate action plan to fill the demand.

Our diversity team will work closely with each subcontractor prior to starting work to develop an official workforce hiring plan and to assist with workforce and apprenticeship planning. The overall workforce hiring plan, described in both subparts B and C, will be updated at each

milestone to include a projected timeline with recruitment and hiring dates and proposed recruiting efforts, all based off of the project schedule. We will connect subcontractors with community workforce associations that help with recruiting a diverse workforce and apprentices. During our weekly scheduling meetings with subs, we will continue to discuss project workforce goals and how to recruit a diverse workforce and apprentices. Workforce and apprenticeship participation will be monitored weekly to ensure requirements and goals are being met.

The HSJV will coordinate regular meetings with each of the pre-apprenticeship groups listed in order to assist in the movement of new pre-apprentice applicants, as well as, graduate pre-apprentices into apprenticeship positions on the project. We will provide regular opportunities for the ODOT/OR representatives to be involved in this regular coordination. Our team have been long standing members of these apprenticeship programs consisting of both union-affiliated programs and the Northwest College of Construction. Our team will work closely with multiple pre-apprenticeship programs; including, Oregon Tradeswomen, Constructing Hope, Portland YouthBuilders, and Portland Opportunities Industrialization Center (POIC) to provide opportunities for women and people of color. To support the development and sustainable growth of a diverse workforce, HSJV plans to appoint a full-time position of workforce advocate. This individual will have ties to the Albina community and be responsible to recruit and advocate for the women and people of color on the project. The advocate is a neutral party that is there to hold both the company and the employee accountable. The workforce advocate will help employees develop construction careers through consistent employment, skill development, future opportunities, and a work environment free from hate, discrimination, and privilege. This position is necessary to restore justice by taking a population that has been historically marginalized and discriminated against and ensuring their environment, concerns, and voice is heard throughout the employment/career process. The roles and methodologies employed by the Workforce Advocate will be further developed once this individual is selected.

Employees recruited to work on the project, will be referred by the workforce advocate to one of four programs, all outlined in this plan:

1. Direct Hire (Explained in more detail below: Maximizing Opportunities)
2. Pre-Apprenticeship
3. Apprenticeship
4. Middle-Management Internship and Educational program

Once the prospective employee is enrolled in the appropriate program, the workforce advocate will work with each employee to establish an Individual Development Plan, meet with the employee on a regular basis, and monitor their progress toward individual goals, ensuring sustainable and meaningful employment. The workforce advocate will be a resource for both the employee and the employer to help navigate and mitigate conflicts as they arise. The frequency of meetings will be customized to each employee's needs.

### **Middle Management Education and Internship**

The size and duration of this project creates a unique opportunity to fill a longstanding need for growth in middle management in the DBE contracting community. The lack of employees mirroring the diversity of the region within middle management has historically hindered the hiring, development, and retention of diverse workers. The HSJV team has a plan in place that will help change this standard in the industry. It is imperative for middle managers to learn the business of construction, to grow to become superintendents, project managers, area managers, presidents, and owners. Furthermore, without diversity in front-line management, it is difficult to develop a diverse workforce industry wide.

Our team is working closely with Clark College in conjunction with Portland Community College (PCC), and several larger general contractors to develop a curriculum for a construction management course. Our plan is to grow this program from a two-year to a four-year degree by moving students after graduation from either Clark College or PCC to Portland State's construction management program. We will specifically target and sponsor young men and women of color for this program by conducting open houses at high schools to inform students, counselors, and teachers about opportunities in the trades and middle management. We believe the I-5 Rose Quarter Improvement Project is the perfect project to launch this innovative program.

HSJV will recruit traditional interns, students attending local colleges and universities, including students with ties to the Albina community. We will recruit from programs and universities in the region and offer working employment opportunities during both summer months and/or during the school year.

HSJV anticipates recruiting six to ten traditional interns per year throughout the project. We also anticipate and will encourage intern recruitment from the MCMGC's and other large subcontractors working on the project.

In addition to efforts described above, through the Workforce Advocate, HSJV will recruit members with ties to the Albina community who are interested in the construction industry but have no experience. HSJV staff will teach these individuals important administrative and management construction skills, intended to be a foundation for future growth, facilitating a career in this well-paying industry.

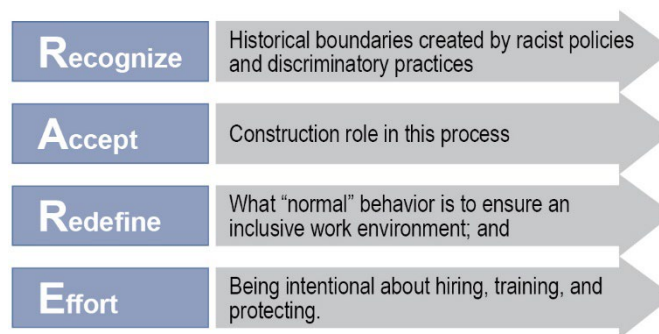
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## Subpart C: Utilization of a Diverse Workforce during Construction

The I-5 Rose Quarter Improvement Project presents a unique opportunity for workforce development, specifically as it relates to minorities, due to the duration of the pre-construction services scope and the estimated duration of construction, which is approximately seven years combined. Overall project duration includes the following:

- Preconstruction: HSJV will have the ability to produce analysis to design diversity into specific scopes of work;
- Construction: The extended duration offers unique opportunity to develop and implement a more comprehensive approach; and
- Post Construction: Outcomes are long successful careers with high paying wages.

The HSJV approach to creating a diverse workforce is described by an acronym stated as R.A.R.E.:



This Diversity Plan will achieve the following measures:

- Create a project specific assessment of the workforce hours by trade over the duration of the project including EWP's and MCP;
- Build consensus between HSJV, ODOT, and COAC on the approach;
- Better define trades that historically reflect deficiencies in diversity to target recruitment and training opportunities with HSJV and all major subcontractors on the project;
- Educate partners on best practices and cultural competency to create a culture of inclusion that will encourage minority candidates to apply and take advantage of opportunities;
- Educate workforce on best practices to be successful in the construction industry as construction industry culture can be overwhelming for people of color, as well as underrepresented populations;
- Work to ensure the Project Team reflects a diverse workforce; and
- Meet or exceed Workforce Goals established for the project.

The goals outlined in the plan exceed those outlined in Exhibit C-2 of the CMGC contract. If at any time in the project goals in Exhibit C-2 are not being met, and affirmative action plan will be initiated. HSJV recognizes and is fully committed to the recruitment, retention, and promotion of historically disadvantaged or underrepresented people, who are interested in careers in the construction industry.

We are committed to meeting or exceeding the target including the minority male workers twenty-five percent (25%) of total project hours, and women workers shall be fourteen percent (14%) of total project hours. These workforce diversity targets apply to the workforce of all Employers on the project regardless of contract size. Our commitment will target a



minority male and female workforce and provide disaggregated reporting throughout the project by trade as follows:

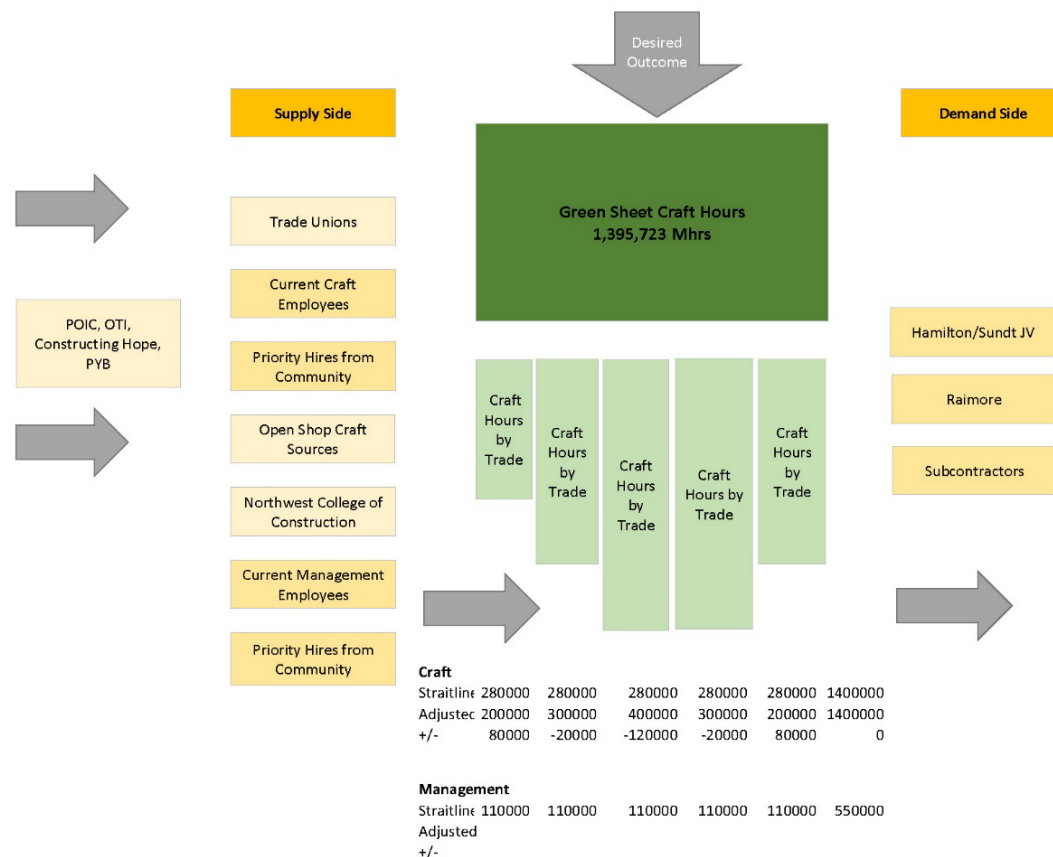
African American	Hispanic or Latino
American Indian/Alaskan Native	Native Hawaiian or other Pacific Islander
Asian	Caucasian

When referencing the data included in Appendix A, Greensheet example, based on schedule, we can predict the workforce required. An example scope of work entails 19,568 work hours planned over a 6-month duration, predicting the need of about 19 employees (19,568 hours/1,000 hours in 6 months = approx. 19-20 workers).

Trade	Number Required
Carpenter	6
Laborer	4
Operator	1
Electrician	1
Iron Worker	7

These gross numbers provide the information necessary to predict and target diversity with each trade and scope of work whether subcontracted or self-performed. The information is also used to establish projected hiring needs within each trade. The project schedule will indicate timeframe, month, and year.

*Example prediction of work hours by trade from Greensheet tool, and project work schedule:*

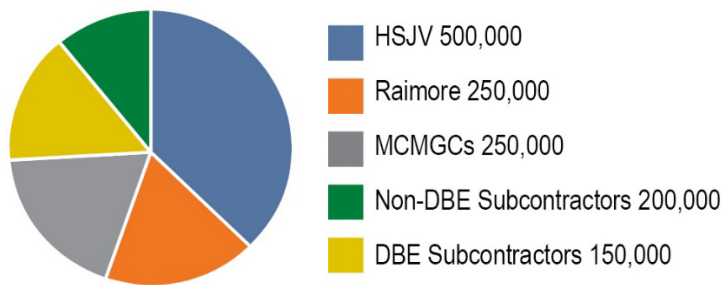


\* This graphic is for illustrative purposes only.

Per Appendix B, 20% Greensheet workforce hours are anticipated as shown.

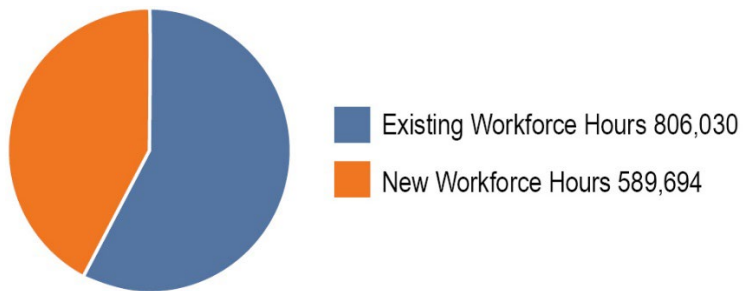
Total Craft Hours	1.4M hours
Carpenters	298K hours
Concrete Finishers	46K hours
Iron Workers	104K hours
Laborers	441K hours
Operators	320K hours
Truck Drivers	135K hours
Electricians	48K hours

Estimated work hours by each project entity



Due to the size and nature of the project, it is anticipated that all entities will need to hire more workers than are currently employed to execute current workloads.

This is referred to as the workforce gap, as shown in orange representing 589,694 new workforce hours.



How each entity hires for these gap positions will provide the greatest effect to overall workforce diversity.

Through the Workforce Advocate, HSJV has and will continue to build a pipeline of diverse workforce. The goal is to hire the gap, or new workforce, on a ratio of no less than 40% BIPOC and 60% Non-BIPOC. Ongoing activity includes partnering with existing local construction projects to place BIPOC workers from all trades now, with the intention of these workers eventually transferring to the Rose Quarter Improvement Project.

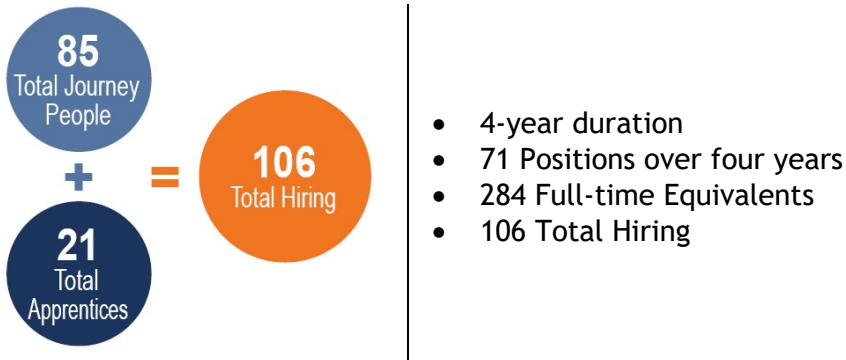
Current ongoing efforts at projects in the region are:

- Raimore: Tri-Met, City of Portland
- Sundt: Tualatin water treatment
- Hamilton: The Dalles, various other projects
- Ongoing work of prospective MCMGCs: Redline, Columbia Waste Water, Bull Run

Total new hiring needs by work hours anticipated for each entity:



This data will enable us to estimate the number of apprentices needed as well:



All of this information will enable HSJV to conduct assessment-based planning throughout the pre-construction period as design develops. These estimated projections will be used to formulate a comprehensive plan for workforce hiring.

HSJV will:

- Utilize Greensheet Projections to formulate workforce hiring plans
  - Current Greensheet Projections show range of 31% to 37% BIPOC employees;
- Conduct further analysis focusing on craft disparity;
- Conduct further analysis throughout design progression; and
- Conduct further analysis based on Subcontractor Selection.

### Tribal Employment Rights Office (TERO)

HSJV will attend project workshops with both Confederated Tribes of Grand Ronde and Confederated Tribes of Warm Springs, and will ensure active TERO certification throughout the duration of the project. HSJV is committed to working with the Tribes to achieve goals assigned to the project.

### Maximizing Opportunities

To meet the aggressive project targets, the workforce advocate will work closely with not only the prime contractor but also the MCMGCs and all subcontractors (large and small) to help understand the project staffing needs and the needs of each individual company. HSJV's Workforce advocate will work closely with the community by providing employment open houses, early in the Pre-construction phase. The workforce advocate will vet potential workforce candidates and funnel them into the following:

- Direct Hire by a company: This will be a candidate that already has the skills and positioning to enter one of the four entry points. Candidates can include journey-level non-union or union candidates, administrative personnel, construction professionals, and construction interns.

- Pre-apprenticeship programs such as Constructing Hope, Oregon Tradeswomen, Portland Opportunity of Industrialization Center (POIC), and Portland Youth Builders: These are candidates who may have the desire to participate on the project but are lacking in the necessary pre-employment skills and/or experience to secure employment.
- Unions and NW College of Construction: These candidates are already in an accredited apprenticeship program. This will also include the graduates of the pre-apprenticeship program.
- Mid-level Management Program: Initially, these candidates will be extremely limited in number due to commitment levels, and build-out of the program. Potential candidates will be referred to either Portland Community or Clark College to enroll in a two-year construction engineering or management program. It is our goal to pair these students with the contractors on this and other projects for internship opportunities so they will be able to earn money while going to school. The candidate will gain practical work experience while receiving a construction education. Clark College provides an avenue for two-year students to transfer to a four-year college to complete their education and receive a Bachelor's degree. In addition, we are working with Portland Community College to develop something similar with Portland State University. This program is still in the developmental stages.
- As demonstrated above, we will use the Greensheet tool to identify the number of recruits required to meet targets in the pre-construction phase.

### **HSJV Compliance**

Diversity Coordinator Bill Bruce will develop and implement all workforce related activities. Bill will act on behalf of HSJV in the following capacity:

- Take corrective action as needed
- Implement the HSJV OJT/workforce program based on the community needs
- Coordinate HSJV activities involving OJT/workforce apprenticeship plans and implementation
- Report on HSJV monthly progress for workforce as noted below and required by the project specifications

### **DBE and Workforce Related Progress Reports**

HSJV will use its own systems to track statistics; including the use of tracking systems chosen by the ODOT team to document and report DBE performance and workforce utilization during the project, in accordance with the project specifications. Our team fully intends to exceed the DBE and workforce goals for the project, and we realize tracking, reporting to ODOT/OR /COAC and monitoring is a critical component in achieving this.

### **Retaining a Diverse Workforce**

#### Cultural Competency

HSJV must take steps to foster a workplace environment where all workers feel safe, welcome, and are treated fairly. Not only is this required by law, but also critically important to recruiting and maintaining a diverse workforce. Cultural competency training and orientation will be required for all project employees, both HSJV and subcontractors. The program will include project values, history of the Albina neighborhood, equity, and equality. If all project employees are culturally competent, we will be able to recruit and retain a diverse workforce and maintain a harassment free work environment. HSJV will employ a PowerPoint slide deck developed by Espousal Strategies, LLC. Employees from HSJV will be trained by Espousal Strategies to deliver this information at the project site. During peak

hiring, this might be delivered several times per week. Additional information, including sample training materials, is found below in Appendix D.

#### Harassment Free Work Environment

HSJV will develop a program that addresses the specific concerns of our region related to harassment issues that are currently relevant in our market. The HSJV Acceptable Worksite Program will meet the criteria outlined in Exhibit C-8 of the CMGC contract and in accordance with the EEOC “Select Task Force Study of the Harassment in the Workplace Report”. HSJV will employ the RISE Up Acceptable Worksite Program. RISE Up (Respect, Inclusion, Safety, and Equity in the construction trades) is a Respectful Workplace Program designed to provide all workers with the tools and support necessary to create and maintain a safe, inclusive and productive environment for everyone. RISE Up provides industry best practice workplace consulting and training to help contractors and sub-contractors create an environment of productivity, safety and equity in construction management and on work sites. Additional information regarding this program can be found below in Appendix E.

*End of Section*

## Closing Thoughts

To achieve the goals outlined above, non-traditional business practices will need to be employed while still complying with specific CFR and ODOT Civil Rights Program requirements. HSJV will need ODOT, the consultant team, and COAC to be partners to provide meaningful input and support for implementation and the continuous improvement of this plan, not traditional over the shoulder criticism. This is imperative, as we all share the same goal of expanding the DBE contracting community and building a sustainable diverse workforce.

## **Chapter 2**

### Appendix A: Greensheet Samples



# Appendix A: Greensheet Samples

Analyzing capacity building opportunities in Greensheet:

Project I-5 Rose Quarter Improvement Project Corridor Section: County Multnomah District 15% Basis of Design Quantities Date: 11/25/2013					DBE/Subcontracting Analysis				
ITEM NO.	ITEM	UNIT	15% Updated	Total	DBE	DBE \$	DBE Participation	Capacity Building	DBE Participation
<b>Bridge No. XXXXX</b>						<b>581,394</b>	<b>12%</b>	<b>1,268,910</b>	<b>26%</b>
3020	CONSTRUCTION	LS	0	0					
3030	SHORING, CRIBBING, AND COFFERDAMS	LS	1	34500	0.00%	-			
3040	STRUCTURE EXCAVATION	CUYD	50	2760	15.00%	414		2,760	
3050	GRANULAR STRUCTURE BACKFILL	CUYD	20	2760	0.00%	-		2,760	
3060	FURNISH DRILLING EQUIPMENT	LS	1	138000	0.00%	-			
3070	DRILLED SHAFT CONCRETE	CUYD	550	303600	0.00%	-			
3080	DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	140,000	193200	0.00%	-			
3090	CSL TEST ACCESS TUBES	FOOT	4,700	77832	0.00%	-			
3100	CSL TESTS	EACH	8	11040	100.00%	11,040			
3110	DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	750	414000	0.00%	-			
3120	PERMANENT SHAFT CASINGS, 60 INCH DIAMETER	FOOT	40	13800	0.00%	-			
3130	BRIDGE LOWERING	LS	1	207000	0.00%	-			
3140	REINFORCEMENT, GRADE 60	LB	580,000	960480	0.00%	-		960,480	
3150	DECK CONCRETE, CLASS HPC4000	CUYD	845	1166100	0.00%	-			
3160	GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	280	309120	50.00%	154,560		154,560	
3170	SAW CUT TEXTURING	SQYD	700	9660	0.00%	-		9,660	
3180	ARCHITECTURAL TREATMENT	SQYD	180	55890	0.00%	-		55,890	
3190	POST-TENSIONING	LS	80,000	441600	0.00%	-			
3200	BRIDGE DRAINS	EACH	4	82800	0.00%	-		82,800	
3210	BEARING DEVICES, BENT 1 & 3	EACH	4	27600	0.00%	-			
3220	3 INCH ELECTRICAL CONDUIT	FOOT	600	28980	100.00%	28,980			
3230	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	FT	120	24840	0.00%	-			
3240	ORNAMENTAL RAIL WITH PEDESTRIAN HANDRAIL	FT	700	386400	100.00%	386,400			

Expanded DBE Opportunities

Prior to capacity building: \$581,394 in DBE value representing 12 % of the scope total value.

After capacity building: \$1,268,910 in DBE value representing 26 % of the scope total value.

DBE Value + Capacity Building Opportunity = Expanded DBE Opportunities

Greensheet depicting expected work hours by trade to predict apprenticeship demand:

Date: 11/25/2013					Total Labor Hours					
ITEM NO.	ITEM	UNIT	15% Updated	Total	Total Labor Hours	Carpenter Hrs.	Laborer Hrs.	Operator Hrs.	Electrician Hrs.	Iron Worker Hrs.
<b>597 - Bridge No. XXXXX</b>					<b>19,568</b>	<b>6,801</b>	<b>4,058</b>	<b>1,358</b>	<b>116</b>	<b>7,234</b>
3020	CONSTRUCTION	LS	0	0						
3030	SHORING, CRIBBING, AND COFFERDAMS	LS	1	34500	138	104		35		
3040	STRUCTURE EXCAVATION	CUYD	50	2760	11		5	6		
3050	GRANULAR STRUCTURE BACKFILL	CUYD	20	2760	11		5	6		
3060	FURNISH DRILLING EQUIPMENT	LS	1	138000	552		221	331		
3070	DRILLED SHAFT CONCRETE	CUYD	550	303600	1,214		972	243		
3080	DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	140,000	193200	773		232	77		464
3090	CSL TEST ACCESS TUBES	FOOT	4,700	77832	311		156			156
3100	CSL TESTS	EACH	8	11040	44	33	11			
3110	DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	750	414000	1,656			414		1,242
3120	PERMANENT SHAFT CASINGS, 60 INCH DIAMETER	FOOT	40	13800	55	41	14			
3130	BRIDGE LOWERING	LS	1	207000	828	621	207			
3140	REINFORCEMENT, GRADE 60	LB	580,000	960480	3,842		960			2,881
3150	DECK CONCRETE, CLASS HPC4000	CUYD	845	1166100	4,664	3,498				1,166
3160	GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	280	309120	1,236	742	247	247		
3170	SAW CUT TEXTURING	SQYD	700	9660	39	29	10			
3180	ARCHITECTURAL TREATMENT	SQYD	180	55890	224	168	56			
3190	POST-TENSIONING	LS	80,000	441600	1,766		442			1,325
3200	BRIDGE DRAINS	EACH	4	82800	331	248	83			
3210	BEARING DEVICES, BENT 1 & 3	EACH	4	27600	110	83	28			
3220	3 INCH ELECTRICAL CONDUIT	FOOT	600	28980	116				116	
3230	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	FT	120	24840	99	75	25			
3240	ORNAMENTAL RAIL WITH PEDESTRIAN HANDRAIL	FT	700	386400	1,546	1,159	386			

Total labor hours calculated at 20% of bid item value, and divided by \$50/hour

Predicting carpenter, laborer, operator hours, etc., in the Greensheet

\* Graphics are for illustrative purposes only.

## Chapter 2

### Appendix B: 20% Greensheet Subcontracting and Workforce

Note: Values listed in this appendix are preliminary numbers prior to reconciliation. All values are subject to change.



15 Rose Quarter Improvement Project  
Preliminary Cost Estimate: 20%

Greensheet Tool - Subcontracting

20%

(EWP Analysis Not complete at this time.)

line	BidItem	Client #	Description	Bid Quantity	Unit	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE	MCMGC PKG.	EWP A	EWP B
			<b>200 - Temp Features and Appurtenaces</b>												
1															
2	1000	0210-0100000A	MOBILIZATION	1	LS	41,512,209	8,302,442			4,151,221	2,075,610	830,244		1,2	
3	2020	0100-0101000T	TRAINING	200,000	HR	18	1,753,947			876,974	438,487	175,395		1,2	
4	3000	0221-0100000A	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	1	LS	57,037,162	42,777,871	14,544,476		5,775,013	2,887,506	1,155,003		1,2	
5	4000	0223-0170000E	RAILROAD FLAGGER SERVICES	1	EACH	507,000	507,000								
6	5000	0227-0157000A	TEMPORARY ILLUMINATION (LOCAL STREETS)	1	LS	852,000	852,000			852,000	426,000	170,400		1,2	
7	6000	0227-0157000A	TEMPORARY ILLUMINATION (FREEWAY)	1	LS	1,695,000	1,695,000	1,695,000							
8	7000	0227-0158000A	TEMPORARY TRAFFIC SIGNAL	7	EA	55,000	385,000			385,000	192,500	77,000		1,2	
9	8000	0256-0109100A	TEMPORARY RETAINING WALL	1	LS	1,803,178	360,636	180,318		180,318	90,159	36,064		1,2	
10	9000	0280-0100000A	EROSION CONTROL	1	LS	16,202,202	8,101,101	4,050,550		4,050,550	2,025,275	810,110		1,2	
11	10000	0294-	HAZMAT PLAN	1	LS	25,000	18,750			9,375	4,688	1,875		1,2	
12	11000	0294-9290000K	HAZARDOUS SOIL REMOVAL	5,000	CUYD	599	1,498,273			749,136	374,568	149,827		1,2	
13	12000	0294-9290001K	CONTAMINATED SOIL MANAGEMENT	188,421	CUYD	174	11,457,858	8,593,393							
14			<b>300 - Roadwork</b>												
15	13000	0305-0100000A	CONSTRUCTION SURVEY WORK	1	LS	16,198,343	8,099,172	4,049,586		4,049,586		4,049,586		1-4	
16	14000	0310-0106000A	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS	11,286,343	5,643,172			5,643,172	2,821,586	1,128,634		1,2	
17	15000	0320-0100000R	CLEARING AND GRUBBING	10	ACRE	10,398	51,989			51,989	25,995	10,398		1,2	
18	16000	0330-0105000K	GENERAL EXCAVATION	36,790	CUYD	119	2,190,248			2,190,248	1,095,124	438,050		1,2	
19	17000	0331-0106000J	12 INCH SUBGRADE STABILIZATION	18,083	SQYD	63	572,415			572,415	286,208	114,483		1,2	
20	18000	0350-0105000J	SUBGRADE GEOTEXTILE	90,564	SQYD	4	176,173			176,173	88,087	35,235		1,2	
21			<b>400 - Drainage and Sewers</b>												
22	19000	0445-035012BF	12 INCH STORM SEWER PIPE, 10 FT DEPTH	4,717	LF	639	1,506,221	1,204,977		301,244	301,244			1,2	
23	20000	0445-035015BF	15 INCH STORM SEWER PIPE, 10 FT DEPTH	798	LF	508	202,692	162,153		40,538	40,538			1,2	
24	21000	0445-035018BF	18 INCH STORM SEWER PIPE, 10 FT DEPTH	997	LF	546	272,416	217,933		54,483	54,483			1,2	
25	22000	0445-035020BF	21 INCH STORM SEWER PIPE, 10 FT DEPTH	360	LF	657	118,170	94,536		23,634	23,634			1,2	
26	23000	0445-035030CF	30 INCH STORM SEWER PIPE, 20 FT DEPTH	299	LF	1,214	181,459	145,167		36,292	36,292			1,2	
27	24000	0445-035036BF	36 INCH STORM SEWER PIPE, 10 FT DEPTH	893	LF	754	336,685	269,348		67,337	67,337			1,2	
28	25000	0445-035036CF	36 INCH STORM SEWER PIPE, 20 FT DEPTH	719	LF	1,333	479,166	383,333		95,833	95,833			1,2	
29	26000	0470-0101000E	CONCRETE STORM SEWER MANHOLES	17	EA	24,098	204,829	163,863		40,966	40,966			1,2	
30	27000	0470-0104000E	CONCRETE MANHOLES, STORM SEWER POLLUTION CON	3	EA	123,329	184,994	147,995		36,999	36,999			1,2	
31	28000	0470-0315000E	CONCRETE INLETS, TYPE G-2	103	EA	13,347	687,392	549,914		137,478	137,478			1,2	
32			<b>510 - Bridge Nos. 1635B (NB Hwy 1 Conn to N Greeley Ave over City Streets)</b>												
33	290	05XX-	RETROFIT/WIDENING												
34			<b>515 - Bridge Nos. 08958E (Hwy 1 NB to Hwy 61 SB over Conn (E Fremont Intchg))</b>												
35	31000	0501-0100000A	BRIDGE REMOVAL WORK	2,000	SQFT	168	335,137			167,569					
36	32000	0510-0100000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS	223,909	55,977								
37	33000	0510-0101000K	STRUCTURE EXCAVATION	209	CUYD	548	22,913	22,913							
38	34000	0515-0100000A	FURNISH MICROPILE EQUIPMENT	1	LS	100,000	100,000								
39	35000	0515-0110000E	MICROPILES	36	EACH	10,782	388,136	77,627							
40	36000	0515-0120000E	MICROPILE VERIFICATION LOAD TEST	1	EACH	25,000	25,000	5,000							
41	37000	0515-0130000E	MICROPILE PROOF LOAD TEST	4	EACH	5,000	20,000	4,000							
42	38000	0530-0104000O	REINFORCEMENT, GRADE 60	290,000	LB	3	670,126			670,126					
43	39000	0540-0111000K	FOUNDATION CONCRETE, CLASS 3300	80	CUYD	1,269				80					
44	40000	0540-0207000K	DECK CONCRETE, CLASS HPC4500	210	CUYD	3,597									
45	41000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	480	CUYD	6,039									
46	42000	0540-0401000J	SAW CUT TEXTURING	620	SQYD	7		4,340							
47	43000	0581-0100000E	BRIDGE DRAINS	3	EACH	26,487									
48	43050	0582-0010000E	BEARING DEVICES	4	EA	1,861									
49	44000	0583-0105000F	2 INCH ELECTRICAL CONDUIT	2,140	FOOT	36		77,040							
50	45000	0586-0500000A	MODULAR BRIDGE JOINT SYSTEMS	36	FOOT	1,236		77,040		77,040					
51	46000	0586-0500000A	DOUBLE STRIP SEAL REPLACEMENT FOR MODULAR BRID	74	FOOT	1,197									
52	47000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	1,070	FOOT	444									
53			<b>520 - Bridge Nos. N8958A (Fremont Viaduct, Hwy 1 NB)</b>												
54	49000	0501-0100000A	BRIDGE REMOVAL WORK	2,320	SQFT	193	447,466			223,733					
55	50000	0510-0100000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS	461,400									
56	51000	0510-0101000K	STRUCTURE EXCAVATION	574	CUYD	563	64,672	64,672							
57	52000	0510-0106000K	GRANULAR WALL BACKFILL	10	CUYD	119	237	237							
58	53000	0510-0108000K	GRANULAR STRUCTURE BACKFILL	355	CUYD	84									











line	Biditem	Client #	Description	Bid Quantity	Unit	Total Cost
313	292000	0530-01040000	REINFORCEMENT, GRADE 60	610,000	LB	2,142,257
314	293000	0540-0203000A	DECK CONCRETE, CLASS HPC4000	290	CUYD	2,415
315	294000	0540-0302000A	GENERAL STRUCTURAL CONCRETE, CLASS 4000	1,100	CUYD	3,078
316	295000	0543-0100000J	ARCHITECTURAL TREATMENT	180	SQYD	263
317	296000	0555-0010100A	POST-TENSIONING	80,000	LS	5
318	297000	0581-0100000E	BRIDGE DRAINS	4	EACH	25,847
319	298000	0582-0010000E	BEARING DEVICES, BENT 1 & 3	12	EACH	7,782
320	299000	0583-0202000F	GRC CONDUIT SYSTEM, INCH DIAMETER	580	FOOT	60
321	300000	0585-0210100A	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	70	FOOT	500
322	301000	0587-0131000A	ORNAMENTAL RAIL WITH PEDESTRIAN HANDRAIL	570	FOOT	400
323	302000	0842-0401000E	BRIDGE IDENTIFICATION MARKERS	2	EACH	447
324			<b>598 - Retaining Walls &amp; Sound Walls</b>			
325	303000	0596-0108000A	RETAINING WALL, WALL 1 (CANTILEVER SOLDIER PILE)	2,175	SF	285
326	304000	0596-0108000A	RETAINING WALL, WALL 2a (CANTILEVER SOLDIER PILE)	5,066	SF	314
327	305000	0596-0108000A	RETAINING WALL, WALL 2b (ELIOT WALL, FOR DETAILS S	6,630	SF	1,213
328	306000	0596-0108000A	RETAINING WALL, WALL 3B (SOLDIER PILE WALL)	4,000	SF	375
329	307000	0596-0108000A	RETAINING WALL, WALL 3T (SOLDIER PILE WALL WITH LI	3,025	SF	854
330	308000	0596-0108000A	RETAINING WALL, WALL 3 (LIGHTWEIGHT BACKFILL)	1,500	CUYD	325
331	308050	0596-0108000A	RETAINING WALL, WALL 3 NCW (NORTH COVER WINGWA	2,540	SF	641
332	309000	0596-0108000A	RETAINING WALL, WALL 4 (CANTILEVER SOLDIER PILE/S	3,650	SF	746
333	313000	0596-0108000A	RETAINING WALL, WALL 7 (CANTILEVER SOLDIER PILE)	4,435	SF	294
334	314000	0596-0108000A	RETAINING WALL, WALL 8 (SOLDIER PILE TIE-BACK)	6,350	SF	259
335	315000	0596-0108000A	RETAINING WALL, WALL 9 (SOLDIER PILE TIE-BACK)	7,715	SF	252
336	316000	0596-0108000A	RETAINING WALL, WALL 11 (MSE)	3,660	SF	322
337	317000	0596-0108000A	RETAINING WALL, WALL 11a (MSE)	558	SF	212
338	318000	0596-0108000A	RETAINING WALL, WALL 11b (MSE)	1,474	SF	192
339	319000	0596-0108000A	RETAINING WALL, WALL 12 (CANTILEVER SOLDIER PILE)	6,965	SF	262
340	320000	0596-0108000A	RETAINING WALL, WALL 13 (CANTILEVER SOLDIER PILE)	5,515	SF	288
341	321000	0596-0108000A	RETAINING WALL, WALL 14 (SOLDIER PILE DEADMAN W/	5,900	SF	372
342	321100	0596-0108000A	RETAINING WALL, WALL 14 (LIGHTWEIGHT FILL)	670	CY	328
343	322000	0596-0108000A	RETAINING WALL, WALL 15 (SOLDIER PILE DEADMAN W/	10,860	SF	284
344	322100	0596-0108000A	RETAINING WALL, WALL 15 (LIGHTWEIGHT FILL)	1,540	CY	312
345	323000	0596-0108000A	RETAINING WALL, WALL 16 (MSE)	1,873	SF	233
346	324000	0596-0108000A	RETAINING WALL, WALL 19 (CIP)	1,660	SF	262
347	325000	0596-0108000A	RETAINING WALL, WALL 20 (MSE)	2,867	SF	208
348	327000	0596-0108000A	RETAINING WALL, WALL 22 (DOUBLE MSE)	1,644	SF	205
349	328000	0596-0108000A	RETAINING WALL, WALL 23 (DOUBLE MSE)	1,644	SF	205
350	329000	0597-0100000J	SOUND WALL, WALL 24	23,276	SF	58
351	330000	0597-0100000J	SOUND WALL, WALL 25	38,500	SF	75
352			<b>599 - TEMPORARY STRUCTURES &amp; PAVING</b>			
353	331000	0350-0105000J	SUBGRADE GEOTEXTILE	32,474	SQYD	4
354	332000	05XX-	BROADWAY SHOOFLY TEMPORARY BRIDGE(WB)	6,400	SQFT	456
355	333000	0641-0102000M	AGGREGATE BASE	21,649	TON	59
356	334000	0745-0302000M	LEVEL 3, 1/2 INCH ACP	15,176	TON	168
357	334100	0759-0128000J	CONCRETE WALKS	14,955	SF	23
358	335000	0745-0620000M	PG 64-22 ASPHALT IN LEVEL 3, 1/2 INCH ACP	911	TON	1,052
359			<b>600 - BASES</b>			
360	336000	0620-0113000J	COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	15,736	SQYD	14
361	337000	0641-0102000M	AGGREGATE BASE	45,044	TON	64
362			<b>700 - WEARING SURFACES</b>			
363	338000	0730-0100000M	EMULSIFIED ASPHALT FOR TACK COAT	33	TON	1,140
364	339000	0745-0302000M	LEVEL 3, 1/2 INCH ACP	24,909	TON	130
365	340000	0745-0402000M	LEVEL 4, 1/2 INCH ACP	9,224	TON	130
366	341000	0745-0620000M	PG 64-22 ASPHALT IN ACP	1,495	TON	1,052
367	342000	0745-0640100M	PG 70-22ER ASPHALT IN ACP	553	TON	1,052
368	343000	0755-0105000J	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT 12	62,722	SQYD	232
369	344000	0756-0115000J	PLAIN CONCRETE PAVEMENT, DOWELED, 12 INCHES THIC	127	SQYD	306
370	345000	0759-0110000F	CONCRETE CURBS, STANDARD CURB	14,256	FOOT	61
371	346000	0759-0122000J	CONCRETE ISLANDS	2,222	SQFT	20
372	347000	0759-0126000J	CONCRETE DRIVEWAYS	7,627	SQFT	29
373	348000	0759-0128000J	CONCRETE WALKS	204,452	SQFT	19
374	349000	0759-0150000K	CONCRETE STAIRS	122	CUYD	2,313
375	350000	0759-0154100E	EXTRA FOR NEW CURB RAMPS	118	EA	4,079
376	351000	1069-0100000F	METAL HANDRAIL, RAILS	2,407	FOOT	105
377	352000	0759-0147000J	PATTERNED CONCRETE SURFACING	5,855	SQFT	47
378	353000	0759-0510000E	TRUNCATED DOMES ON NEW SURFACES	576	SQFT	62
379	354000	0759-0800000J	BUS PADS	3,798	SQFT	23

Likely	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE	MCMGC PKG.	EWP A	EWP B
1,281,831		1,281,831						
369,760		184,880						
34,800	34,800							
205,200	205,200							
619,876			619,876	185,963	123,975	3	619,876	
1,590,202			1,590,202	477,061	318,040	3	1,590,202	
1,608,391	321,678							
1,500,639			1,500,639	450,192	300,128	3	1,500,639	
2,583,909			2,583,909	775,173	516,782	3	2,583,909	
487,503			487,503	146,251	97,501	3	487,503	
325,880	65,176							
544,608	108,922							
1,304,053			1,304,053	391,216	260,811	4	1,304,053	
1,643,415	328,683							
1,941,010	388,202							
1,176,776	1,176,776							
118,152	118,152							
283,429	283,429							
1,821,487			1,821,487	546,446	364,297	4	1,821,487	
1,589,086			1,589,086	476,726	317,817	4	1,589,086	
2,194,205			2,194,205	658,261	438,841	4	2,194,205	
219,751			219,751	65,925	43,950	4	219,751	
3,085,687			3,085,687	925,706	617,137	4	3,085,687	
479,902			479,902	143,971	95,980	4	479,902	
435,626	435,626							
434,808	434,808							
597,201	597,201							
337,825	337,825							
337,825	337,825							
1,352,478			1,352,478	676,239	270,496	3	1,352,478	
2,877,699	2,877,699							
126,212	126,212							
1,272,079	1,272,079							
2,554,633	2,554,633							
350,976	350,976							
958,234	958,234							
110,430			110,430	55,215	22,086	1,2		
1,439,478			1,439,478	719,739	287,896	1,2		
37,622			18,811		18,811	1,2		
3,238,170			1,619,085		1,619,085	1,2		
1,199,120			599,560		599,560	1,2		
1,573,291			786,645		786,645	1,2		
581,960			290,980		290,980	1,2		
867,096			867,096	433,548	173,419	1,2		
44,798			44,798	22,399	8,960	1,2		
223,959			223,959	111,979	44,792	1,2		
3,953,539			3,953,539	1,976,769	790,708	1,2		
282,194			282,194	141,097	56,439	1,2		
481,282			481,282	240,641	96,256	1,2		
252,735			252,735		252,735	1,2		
277,179			277,179	138,589	55,436	1,2		
35,464			35,464	17,732	7,093	1,2		
86,866			86,866	43,433	17,373	1,2		







**I5 Rose Quarter Improvement Project**  
**Preliminary Cost Estimate: 20%**

**Greensheet Tool - Workforce**

Biditem	Client #	Description	Bid Quantity	Unit
<b>200 - Temp Features and Appurtenaces</b>				
1000	0210-010000A	MOBILIZATION	1	LS
<b>300 - Roadwork</b>				
13000	0305-010000A	CONSTRUCTION SURVEY WORK	1	LS
14000	0310-0106000A	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS
15000	0320-010000R	CLEARING AND GRUBBING	10	ACRE
16000	0330-0105000K	GENERAL EXCAVATION	36,790	CUYD
17000	0331-0106000J	12 INCH SUBGRADE STABILIZATION	18,083	SQYD
18000	0350-0105000J	SUBGRADE GEOTEXTILE	90,564	SQYD
<b>400 - Drainage and Sewers</b>				
19000	0445-035012BF	12 INCH STORM SEWER PIPE, 10 FT DEPTH	4,717	LF
20000	0445-035015BF	15 INCH STORM SEWER PIPE, 10 FT DEPTH	798	LF
21000	0445-035018BF	18 INCH STORM SEWER PIPE, 10 FT DEPTH	997	LF
22000	0445-035020BF	21 INCH STORM SEWER PIPE, 10 FT DEPTH	360	LF
23000	0445-035030CF	30 INCH STORM SEWER PIPE, 20 FT DEPTH	299	LF
24000	0445-035036BF	36 INCH STORM SEWER PIPE, 10 FT DEPTH	893	LF
25000	0445-035036CF	36 INCH STORM SEWER PIPE, 20 FT DEPTH	719	LF
26000	0470-0101000E	CONCRETE STORM SEWER MANHOLES	17	EA
27000	0470-0104000E	CONCRETE MANHOLES, STORM SEWER POLLUTION CONT	3	EA
28000	0470-0315000E	CONCRETE INLETS, TYPE G-2	103	EA
<b>510 - Bridge Nos. 16358 (NB Hwy 1 Conn to N Greeley Ave over City Streets)</b>				
290	05XX-	RETROFIT/WIDENING		
<b>515 - Bridge Nos. 08958E (Hwy 1 NB to Hwy 61 SB over Conn (E Fremont Intchg))</b>				
31000	0501-010000A	BRIDGE REMOVAL WORK	2,000	SQFT
32000	0510-010000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS
33000	0510-0101000K	STRUCTURE EXCAVATION	209	CUYD
34000	0515-010000A	FURNISH MICROPILE EQUIPMENT	1	LS
35000	0515-0110000E	MICROPILES	36	EACH
36000	0515-0120000E	MICROPILE VERIFICATION LOAD TEST	1	EACH
37000	0515-0130000E	MICROPILE PROOF LOAD TEST	4	EACH
38000	0530-0104000O	REINFORCEMENT, GRADE 60	290,000	LB
39000	0540-0111000K	FOUNDATION CONCRETE, CLASS 3300	80	CUYD
40000	0540-0207000K	DECK CONCRETE, CLASS HPC4500	210	CUYD
41000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	480	CUYD
42000	0540-0401000J	SAW CUT TEXTURING	620	SQYD
43000	0581-010000E	BRIDGE DRAINS	3	EACH
43050	0582-0010000E	BEARING DEVICES	4	EA
44000	0583-0105000F	2 INCH ELECTRICAL CONDUIT	2,140	FOOT
45000	0586-0500000A	MODULAR BRIDGE JOINT SYSTEMS	36	FOOT
46000	0586-0500000A	DOUBLE STRIP SEAL REPLACEMENT FOR MODULAR BRIDG	74	FOOT
47000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	1,070	FOOT
<b>520 - Bridge Nos. N8958A (Fremont Viaduct, Hwy 1 NB)</b>				
49000	0501-010000A	BRIDGE REMOVAL WORK	2,320	SQFT

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
7,409,929	104,365	20,873	12,524	10,437	25,048	17,742	17,742		
0	0								
2,891,404	40,724				8,145	32,579			
2,014,612	28,375				5,675	14,187	8,512		
18,560	261					52	209		
781,919	11,013					2,203	8,810		
204,352	2,878				2,015	863			
62,894	886				620	266			
0	0								
537,721	7,574				5,301	1,515	757		
72,361	1,019				713	204	102		
97,253	1,370				959	274	137		
42,187	594				416	119	59		
64,781	912				639	182	91		
120,197	1,693				1,185	339	169		
171,062	2,409				1,687	482	241		
73,124	1,030	721	206		103				
66,043	930	651	186		93				
245,399	3,456	2,419	691		346				
0	0								
0	0								
0	0								
59,822	843				421	421			
39,968	563				394	169			
20,450	288					288			
17,850	251				126	126			
69,282	976				488	488			
4,463	63				31	31			
3,570	50				25	25			
132,908	1,872			1,685		187			
18,118	255	179	26		38	13			
134,841	1,899	1,329	190		285	95			
517,463	7,288	5,102	729		1,093	364			
775	11				11				
14,184	200	160			40				
1,329	19	15			4				
13,752	194								
7,941	112	89			22				194
15,817	223	178			45				
84,877	1,195	837	120		179	60			
0	0								
79,873	1,125				562	562			

Biditem	Client #	Description	Bid Quantity	Unit	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
50000	0510-010000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS	82,360	1,160				812	348			
51000	0510-0101000K	STRUCTURE EXCAVATION	574	CUYD	57,719	813				488	325			
52000	0510-0106000K	GRANULAR WALL BACKFILL	10	CUYD	212	3				2	1			
53000	0510-0108000K	GRANULAR STRUCTURE BACKFILL	355	CUYD	5,312	75				45	30			
54000	0515-0100000A	FURNISH MICROPILE EQUIPMENT	1	LS	17,850	251				126	126			
55000	0515-0110000E	MICROPILES	63	EACH	117,632	1,657				828	828			
56000	0515-0120000E	MICROPILE VERIFICATION LOAD TEST	1	EACH	8,925	126				63	63			
57000	0515-0130000E	MICROPILE PROOF LOAD TEST	15	EACH	8,033	113				57	57			
58000	0530-01040000	REINFORCEMENT, GRADE 60	253,000	LB	111,907	1,576			1,419		158			
59000	0540-0111000K	FOUNDATION CONCRETE, CLASS 3300	105	CUYD	23,373	329	263			49	16			
60000	0540-0207000K	DECK CONCRETE, CLASS HPC4500	320	CUYD	226,464	3,190	2,552			478	159			
61000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	290	CUYD	174,016	2,451	1,961			368	123			
62000	0540-0401000J	SAW CUT TEXTURING	1,120	SQYD	1,399	20				20				
63000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	38	SQYD	4,664	66	53			13				
64000	0550-0123000F	MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	1,020	FOOT	156,644	2,206	1,324			441	441			
65000	0550-0123000F	B151 PRECAST PRESTRESSED GIRDERS	166	FOOT	25,885	365	219			73	73			
66000	0560-0102000A	STEEL PLATE GIRDER	125,000	LS	114,587	1,614			968	323	323			
67000	0581-0100000E	BRIDGE DRAINS	5	EACH	23,627	333	266			67				
67050	0582-0010000E	BEARING DEVICES	48	EACH	9,295	131	105			26				
68000	0583-0105000F	2 INCH ELECTRICAL CONDUIT	1,840	FOOT	11,824	167							167	
69000	0585-0206100A	POURED JOINT SEALS	200	LS	2,333	33	26			7				
70000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	920	LS	72,276	1,018	713	102		153	51			
71000	0599-0102000	CONCRETE SLOPE PAVING	800	SQFT	7,729	109	87			11	11			
72000	929	POTENTIAL FOUNDATION IMPROVEMENT- BENT 11,12,13	4	EACH	203,376	2,864	2,292			286	286			
		<b>525 - Bridge Nos. S8958A (Fremont Viaduct, Hwy 1 SB)</b>			0	0								
73000	05XX-	RETROFIT/WIDENING	0	LS	0	0								
		<b>530 - Bridge Nos. 08782A (Eliot Viaduct)</b>			0	0								
75000	0501-0100000A	BRIDGE REMOVAL WORK	2,650	SQ F	59,079	832				416	416			
76000	0503-0102000J	BRIDGE DECK COLD PLANE PAVEMENT REMOVAL, 2-4 INCH	2,300	SQYD	3,111	44					44			
77000	0510-0100000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS	240,052	3,381				2,367	1,014			
78000	0510-0101000K	STRUCTURE EXCAVATION	610	CUYD	39,912	562				337	225			
79000	0510-0106000K	GRANULAR WALL BACKFILL	25	CUYD	430	6				4	2			
80000	0512-0100000A	FURNISH DRILLING EQUIPMENT	1	LS	17,850	251				151	101			
81000	0512-0101000A	DRILLED SHAFT CONCRETE	545	CUYD	68,707	968				290	677			
82000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	272,500	LS	128,834	1,815			1,633		181			
83000	0512-0105000F	CSL TEST ACCESS TUBES	2,640	FOOT	8,244	116			105		12			
84000	0512-0106000E	CSL TESTS	8	EACH	2,142	30				9	21			
85000	0512-0113000F	DRILLED SHAFT EXCAVATION, 78 INCH DIAMETER	440	FOOT	88,563	1,247				374	873			
86000	0530-01040000	REINFORCEMENT, GRADE 60	280,000	LB	126,080	1,776			1,598		178			
87000	0540-0207X00K	DECK CONCRETE, CLASS HPC4500	320	CUYD	174,793	2,462	1,969			369	123			
88000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	300	CUYD	140,867	1,984	1,587			298	99			
89000	0540-0401000J	SAW CUT TEXTURING	1,360	SQYD	1,699	24				24				
90000	0550-0123000F	MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	2,115	FOOT	303,810	4,279	2,567			856	856			
90050	0580010000E	BEARING DEVICES	70	EACH	23,366	329	263			66				
91000	0585-0200100A	ASPHALTIC PLUG JOINT SEALS	240	FOOT	7,536	106	85			21				
92000	0585-0201100K	ASPHALTIC PLUG JOINT SEAL MATERIAL	3	CUYD	4,527	64	51			13				
93000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	430	FOOT	33,022	465	326	47		70	23			
94000	0591-0100000J	WARRANTED SPRAY WATERPROOFING MEMBRANE	31,000	SQFT	80,787	1,138		910		228				
95000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	0	SQYD	0	0								
96000	0584-0100000F	ELASTOMERIC CONCRETE NOSING	0	FOOT	0	0								
97000	0585-0210100A	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	0	LS	0	0								
		<b>535 - Bridge No. 08573 (N Flint Ave over Hwy 1)</b>			0	0								
98000	05XX-	DEMOLITION/REMOVAL	1	LS	182,246	2,567				1,283	1,283			
		<b>540 - Bridge No. 08574 (NE Vancouver over Hwy 1)</b>			0	0								

Biditem	Client #	Description	Bid Quantity	Unit
99000	05XX-	DEMOLITION/REMOVAL		1 LS
		<b>545 - Bridge No. 08575R (NE Broadway over Hwy 1)</b>		
100000	05XX-	DEMOLITION/REMOVAL		1 LS
		<b>550 - Bridge No. 08575Q (NE Williams over Hwy 1)</b>		
101000	05XX-	DEMOLITION/REMOVAL		1 LS
		<b>555 - Bridge No. 08575 (NE Weidler St over Hwy 1)</b>		
102000	05XX-	DEMOLITION/REMOVAL		1 LS
		<b>560 - Bridge No. XXXXX (Single Cover)</b>		
104000	0501-010000A	BRIDGE REMOVAL WORK		1 LS
105000	0510-0101000K	STRUCTURE EXCAVATION	11,370	CUYD
106000	0510-0108000K	GRANULAR STRUCTURE BACKFILL	15,190	CUYD
107000	0512-0100000A	FURNISH DRILLING EQUIPMENT		1 LS
108000	0512-0101000A	DRILLED SHAFT CONCRETE, 72 INCH DIAMETER		1 LS
109000	0512-01004000A	DRILLED SHAFT REINFORCEMENT, GRADE 60		1 LS
110000	0512-0105000F	CSL TEST ACCESS TUBES	28,200	FOOT
111000	0512-0106000E	CSL TESTS	61	EACH
112000	0512-0112000F	DRILLED SHAFT EXCAVATION, 72 INCH DIAMETER	4,700	FOOT
113000	0520-014XXXX	FURNISH PP 30 X 0.625 STEEL PILES	53,200	FOOT
114000	0520-0141000F	FURNISH TEST PILES		0 FOOT
115000	0520-0324XXXX	DRIVE PP 30 X 0.625 STEEL PILES	665	EACH
116000	0520-0325000E	DRIVE TEST PILES		0 EACH
117000	0520-0328000E	PILE LOAD TEST (STATIC)		0 EACH
118000	0520-0329000E	PILE LOAD TEST (DYNAMIC)	13	EACH
119000	0520-0330000E	REINFORCED PILE TIPS	665	EACH
120000	0520-0435XXXX	PP 30 X 0.625 STEEL PILE SPLICES	665	EACH
121000	530-01040000	REINFORCEMENT, GRADE 60	6,312,600	LB
122000	0540-0207X00K	DECK CONCRETE, CLASS HPC4500	4,733	CUYD
123000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	12,620	CUYD
124000	0540-0313000K	GENERAL STRUCTURAL CONCRETE, CLASS 5000	2,482	CUYD
125000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	4,300	SQYD
126000	0550-0139000F	30 INCH PRECAST PRESTRESSED SLABS	3,770	FOOT
127000	0550-0108200F	BT 60 PRECAST PRESTRESSED GIRDERS	38,750	FOOT
128000	0555-0010100A	POST-TENSIONING		1 LS
129000	0581-0100000E	BRIDGE DRAINS		0 EACH
130000	0582-0010000E	BEARING DEVICES, ELASTOMERIC	514	EACH
131000	0585-0206100A	POURED JOINT SEAL		1 LS
132000	0585-0214000A	STRIP SEALS		0 LS
133000	0585-0215000A	PRECOMPRESSED FOAM SILICONE SEAL		1 LS
134000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH		1 LS
135000	1050-0224000F	PROTECTIVE FENCE	1,220	FOOT
136000		FLS EARLY DETECTION SYSTEM		1 LS
137000		FLS EARLY NOTIFICATION SYSTEM		1 LS
138000		FIRE PROTECTION COVER BOARD	186,000	SQFT
144000		FLS JET FANS		1 LS
145000		TRACK-MOUNTED VIDEO INSPECTION SYSTEM		1 LS
		<b>570 - Bridge Nos. 08583 (Hwy 1 over NE Hassalo St &amp; NE Holladay St)</b>		
147000	0501-0100000A	BRIDGE REMOVAL WORK	2,258	SQFT
148000	0510-0101000A	STRUCTURE EXCAVATION	214	CUYD
149000	0510-0108000A	GRANULAR STRUCTURE BACKFILL	84	CUYD
150000	0512-0100000A	FURNISH DRILLING EQUIPMENT		1

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
169,145	2,382				1,191	1,191			
0	0								
72,471	1,021				510	510			
0	0								
49,218	693				347	347			
0	0								
57,927	816				408	408			
0	0								
0	0					0	0		
2,271,817	31,997				19,198	12,799			
229,165	3,228				1,937	1,291			
17,850	251				75	176			
573,880	8,083				2,425	5,658			
195,116	2,748			2,473		275			
84,466	1,190				357	833			
16,333	230				69	161			
918,910	12,942				7,765	5,177			
1,103,874	15,548				3,110	4,664			7,774
0	0								
900,905	12,689				2,538	3,807			6,344
0	0								
0	0								
5,087	72				14	21			36
157,526	2,219				444	666			1,109
268,850	3,787				757	1,136			1,893
2,748,641	38,713			34,842		3,871			
1,025,308	14,441	11,553			2,166	722			
2,539,830	35,772	28,618			5,366	1,789			
1,686,372	23,752	19,001			3,563	1,188			
500,266	7,046	5,637			1,057	352			
413,780	5,828	3,497			1,166	1,166			
5,534,602	77,952	46,771			15,590	15,590			
186,149	2,622			2,360		262			
0	0								
171,572	2,417	1,933			362	121			
13,919	196	157			29	10			
0	0								
4,557	64	51			10	3			
45,909	647	453	65		97	32			
40,287	567				454	113			
892,500	12,570				2,514	3,771		6,285	
892,500	12,570				2,514	3,771		6,285	
398,412	5,611				1,122	1,683		2,806	
1,249,500	17,599				3,520	5,280		8,799	
267,750	3,771				754	1,131		1,886	
0	0								
89,375	1,259				629	629			
135,522	1,909				1,145	764			
3,029	43				26	17			
8,925	126				75	50			

Biditem	Client #	Description	Bid Quantity	Unit	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
151000	0512-0111000F	DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	686	FOOT	52,341	737				442	295			
152000	0512-0115200F	PERMANENT SHAFT CASINGS, 60 INCH DIAMETER	686	FOOT	36,735	517				310	207			
153000	0512-0101000A	DRILLED SHAFT CONCRETE	499	CUYD	26,686	376				226	150			
154000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	249,437	LB	116,851	1,646			1,481		165			
155000	0512-0105000F	CSL TEST ACCESS TUBES	3,570	FOOT	10,536	148			134		15			
156000	0512-0106000E	CSL TESTS	16	EACH	4,641	65					65			
157000	0530-0104000A	REINFORCEMENT, GRADE 60	373,074	LB	172,364	2,428			2,185		243			
158000	0540-0102000A	FOUNDATION CONCRETE, CLASS 4000	130	CUYD	28,270	398	319			60	20			
159000	0540-0302000A	GENERAL STRUCTURAL CONCRETE, CLASS 4000	379	CUYD	220,159	3,101	2,481			465	155			
160000	0540-0303000A	GENERAL STRUCTURAL CONCRETE, CLASS 5000	61	CUYD	70,047	987	789			148	49			
161000	0540-0203100A	DECK CONCRETE, CLASS HPC4500	630	CUYD	385,941	5,436	4,349			815	272			
162000	0540-0203100A	DECK CONCRETE, CLASS HPC4500 (Overlay)	299	CUYD	75,620	1,065	852			160	53			
163000	0540-0401000J	SAW CUT TEXTURING	2,380	SQYD	2,974	42				42				
164000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	290	SQYD	39,956	563	450			84	28			
165000	0550-0XXXXXX	MODIFIED WSDOT WF50G PRECAST PRESTRESSED GIRDE	480	FOOT	88,881	1,252	751			250	250			
166000	0550-0XXXXXX	MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	2,142	FOOT	316,326	4,455	2,673			891	891			
167000	0504-0100000J	CLASS 2 PREPARATION (Overlay)	2,391	SQYD	94,932	1,337		1,070		267				
168000	0581-0100000E	BRIDGE DRAINS	4	EACH	18,976	267	214			40	13			
169000	0582-0010000E	BEARING DEVICES, _____	48	EACH	3,167	45	36			7	2			
170000	0585-0211100A	TYPE "D" PREFORMED COMPRESSION JOINT SEALS	140	FOOT	15,812	223	178			33	11			
171000	0585-0212100A	TYPE "E" PREFORMED COMPRESSION JOINT SEALS	47	FOOT	5,768	81	65			12	4			
172000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	874	FOOT	65,492	922	646	92		138	46			
		<b>575 - Bridge No. 08588C (Hwy 1 SB to Hwy 2 EB over Hwy 1 and Conn (Banfield Intch</b>			<b>0</b>	<b>0</b>								
174000	0501-0100000A	BRIDGE REMOVAL WORK	1,022	SQFT	23,721	334				167	167			
175000	0512-0101000A	DRILLED SHAFT CONCRETE	29	CUYD	3,633	51				26	26			
176000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	14,544	LB	7,299	103			93		10			
177000	0512-0105000F	CSL TEST ACCESS TUBES	200	FOOT	788	11			10		1			
178000	0512-0106000E	CSL TESTS	1	EACH	312	4			4		0			
179000	0512-0114000F	DRILLED SHAFT EXCAVATION, 72 INCH DIAMETER	0	FOOT										
180000	0512-0XXXXXX	DRILLED SHAFT EXCAVATION, 120 INCH DIAMETER	40	FOOT	16,620	234			211		23			
181000	0512-0115500F	PERMANENT SHAFT CASINGS, 120 INCH DIAMETER	34	FOOT	2,124	30			27		3			
181010		FURNISH MICROPILE EQUIPMENT	1	LS	17,850	251				126	126			
181020		MICROPILES	32	EA	0	0								
181030		MICROPILE VERIFICATION LOAD TEST	2	EA	8,925	126				63	63			
181040		MICROPILE PROOF LOAD TEST	2	EA	1,785	25				13	13			
181050		FURNISH MICROPILE CASING	1,104	FOOT	14,780	208				104	104			
181060		INSTALL MICROPILE	32	EA	58,835	829				414	414			
182000	0530-01040000	REINFORCEMENT, GRADE 60	48,754	LB	28,350	399			359		40			
182500	0540-0113000K	FOUNDATION CONCRETE, CLASS 4000	52	CUYD	18,941	267	213			40	13			
183000	0540-0313000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	45	CUYD	55,224	778	622			117	39			
184000	0540-0206000K	DECK CONCRETE, CLASS HPC4500	56	CUYD	37,203	524	419			79	26			
184500	0540-0XXXXXX	COLUMN STRENGTHENING	2	EACH	19,398	273	219			41	14			
185000	0540-0401000J	SAW CUT TEXTURING	39	SQYD	49	1	1			0	0			
186000	0560-0102000A	STEEL PLATE GIRDER	27,015	LB	32,080	452			361	68	23			
187000	0582-0100000E	BEARING DEVICES, BENT _____	4	EACH	7,630	107	86			16	5			
188000	0585-0214000A	STRIP SEALS	29	FOOT	4,082	57	46			9	3			
189000	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	381	FOOT	29,785	420	294	42		63	21			
190000	0594-0103000A	SURFACE PREPARATION	1	LS	2,412	34		27		7				
191000	0594-0104000A	COATING APPLICATION	1	LS	1,608	23		18		5				
192000	0594-0105000A	COATING MATERIALS	1	LS	402	6		5		1				



Biditem	Client #	Description	Bid Quantity	Unit
193000	1050-0224000F	10 FT TYPE "D" PROTECTIVE FENCE	70	FOOT
194000	9400-0010300A	OTHER RAILROAD COSTS	1	LS
<b>580 - Bridge No. N8588E (Hwy 1 NB over UPRR)</b>				
195500	0587-0125000A	TYPE "F" CONCRETE RAIL, RETROFIT	1,212	FOOT
<b>585 - Bridge No. S8588E (Hwy 1 SB over UPRR)</b>				
197000	0501-0100000A	BRIDGE REMOVAL WORK	2,172	SQFT
198000	0510-0101000K	STRUCTURE EXCAVATION	522	CUYD
199000	0510-0108000K	GRANULAR STRUCTURE BACKFILL	528	CUYD
200000	0512-0100000A	FURNISH DRILLING EQUIPMENT	1	LS
201000	0512-0101000A	DRILLED SHAFT CONCRETE	253	CUYD
202000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	126,522	LB
203000	0512-0105000F	CSL TEST ACCESS TUBES	1,416	FOOT
204000	0512-0106000E	CSL TESTS	9	EACH
205000	0512-0108000F	DRILLED SHAFT EXCAVATION, 36 INCH DIAMETER	116	FOOT
206000	0512-0111000F	DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	159	FOOT
207000	0512-0114000F	DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	75	FOOT
208000	0515-0100000A	FURNISH MICROPILE EQUIPMENT	1	LS
209000	0515-0110000E	MICROPILES	14	EACH
210000	0515-0120000E	MICROPILE VERIFICATION LOAD TEST	1	EACH
211000	0515-0130000E	MICROPILE PROOF LOAD TEST	1	EACH
212000	0515-0140000E	FURNISH MICROPILE CASING	210	FOOT
213000	0515-0150000E	INSTALL MICROPILE	14	EACH
214000	0530-01040000	REINFORCEMENT, GRADE 60	179,220	LB
215000	0540-0113000K	FOUNDATION CONCRETE, CLASS 4000	6	CUYD
216000	0540-0208000K	DECK CONCRETE, CLASS HPC4500	454	CUYD
217000	0540-0313000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	352	CUYD
218000	0540-0401000J	SAW CUT TEXTURING	1,927	SQYD
219000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	88	SQYD
220000	0550-0137000F	21 INCH PRECAST PRESTRESSED SLABS	270	FOOT
221000	0550-0108300F	BT 72 PRECAST PRESTRESSED GIRDERS	0	FOOT
222000	0560-0102000A	STEEL PLATE GIRDER	585,416	LB
223000	0581-0100000E	BRIDGE DRAINS	6	EACH
224000	0582-0100000E	BEARING DEVICES, BENT	43	EACH
225000	0585-0212100A	TYPE "E" PREFORMED COMPRESSION JOINT SEALS	76	FOOT
226000	0585-0214000A	STRIP SEALS	53	FOOT
226500	0587-0126100A	TYPE "F" CONCRETE RAIL, 42 INCH	724	FOOT
227000	0587-0125000A	TYPE "F" CONCRETE RAIL, RETROFIT	545	FOOT
227500	0820-0127000F	CONCRETE BARRIER, TALL	390	FOOT
228000	0594-0103000A	SURFACE PREPARATION	1	LS
229000	0594-0104000A	COATING APPLICATION	1	LS
230000	0594-0105000A	COATING MATERIALS	1	LS
<b>590 - Bridge No. 08588B (Hwy 2 WB Conn to Hwy 1 SB over Hwy 1 (Banfield Intch))</b>				
231000	05XX-	RETROFIT/WIDENING	0	LS
<b>595 - Bridge No. H8588A (Hwy 2 WB Conn to Hwy 1 NB over Lloyd Blvd)</b>				
232000	05XX-	RETROFIT/WIDENING	0	LS
<b>596 - Bridge No. 08588A (Hwy 2 WB to Hwy 1 NB over UPRR (Banfield Intchg))</b>				
234000	0501-0100000A	BRIDGE REMOVAL WORK	1	LS
235000	0510-0100000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS
236000	0510-0101000K	STRUCTURE EXCAVATION	59	CUYD
237000	0510-0108000K	GRANULAR STRUCTURE BACKFILL	42	CUYD

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
2,374	33				27	7			
1,096	15				12	3			
0	0								
91,231	1,285	899	128		193	64			
0	0								
66,356	935				467	467			
128,038	1,803				1,082	721			
11,080	156				94	62			
11,821	166				100	67			
39,860	561				337	225			
58,160	819			737		82			
4,353	61			55		6			
2,588	36				36				
8,755	123				74	49			
10,331	146				87	58			
22,249	313				188	125			
3,570	50				25	25			
0	0				0	0			
4,463	63				31	31			
893	13				6	6			
750	11				5	5			
23,416	330				165	165			
69,127	974			876		97			
3,396	48	38			7	2			
325,492	4,584	3,668			688	229			
196,161	2,763	2,210			414	138			
2,408	34				34				
9,470	133	107			20	7			
23,013	324	194			65	65			
0	0								
526,420	7,414			5,931	1,112	371			
27,554	388	310			58	19			
66,332	934	747			140	47			
7,670	108	86			16	5			
6,842	96	77			14	5			
55,830	786	550	79		118	39			
41,441	584	409	58		88	29			
14,632	206	144	21		31	10			
22,624	319	255			64				
15,083	212	170			42				
3,771	53	42			11				
0	0								
0	0								
0	0								
0	0								
63,588	896				448	448			
8,822	124				87	37			
11,027	155				93	62			
1,500	21				13	8			

Biditem	Client #	Description	Bid Quantity	Unit
238000	0512-010000A	FURNISH DRILLING EQUIPMENT	1	LS
239000	0512-0101000A	DRILLED SHAFT CONCRETE	1	LS
240000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	1	LS
241000	0512-0105000F	CSL TEST ACCESS TUBES	1,000	FOOT
242000	0512-0106000E	CSL TESTS	6	EACH
243000	0512-0112000F	DRILLED SHAFT EXCAVATION, 72 INCH DIAMETER	140	FOOT
244000	0512-0114000F	DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	20	FOOT
245000	0515-010000A	FURNISH MICROPILE EQUIPMENT	1	LS
246000	0515-0110000E	MICROPILES	16	EACH
247000	0515-0120000E	MICROPILE VERIFICATION LOAD TEST	1	EACH
248000	0515-0130000E	MICROPILE PROOF LOAD TEST	2	EACH
249000	0520-0100000A	FURNISH PILE DRIVING EQUIPMENT	1	LS
250000	0520-0127000F	FURNISH PP 16 X 0.5 STEEL PILES	285	FOOT
251000	0520-0312000E	DRIVE PP 16 X 0.5 STEEL PILES	5	EACH
252000	0520-0423000E	PP 16 X 0.5 STEEL PILE SPLICES	5	EACH
253000	0530-0104000O	REINFORCEMENT, GRADE 60	200,600	LB
254000	0540-0111000K	FOUNDATION CONCRETE, CLASS 3300	29	CUYD
255000	0540-0207X00K	DECK CONCRETE, CLASS HPC4500	330	CUYD
256000	0540-0311000K	GENERAL STRUCTURAL CONCRETE, CLASS 3300	6	CUYD
257000	0540-0312000K	GENERAL STRUCTURAL CONCRETE, CLASS 4000	193	CUYD
258000	0545-0100000J	REINFORCED CONCRETE BRIDGE END PANELS	77	SQYD
259000	0550-0137000F	21 INCH PRECAST PRESTRESSED SLABS	225	FOOT
260000	0560-0102000A	STEEL PLATE GIRDER	1	LS
261000	0560-0108000A	STEEL ROLLED BEAM	1	LS
262000	0560-0109000A	STRUCTURAL STEEL MAINTENANCE	1	LS
263000	0581-0100000E	BRIDGE DRAINS	11	EACH
264000	0582-0100000E	BEARING DEVICES, BENT 2-9	48	EACH
265000	0585-0208100A	TYPE "A" PREFORMED COMPRESSION JOINT SEALS	1	LS
266000	0585-0209100A	TYPE "B" PREFORMED COMPRESSION JOINT SEALS	1	LS
267000	0585-0210100A	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	1	LS
268000	0585-0212100A	TYPE "E" PREFORMED COMPRESSION JOINT SEALS	1	LS
269000	0585-0214000A	STRIP SEALS	1	LS
270000	0587-0109000A	TYPE "F" CONCRETE BRIDGE RAIL	1	LS
271000	0587-0125000A	TYPE "F" CONCRETE RAIL, RETROFIT	1	LS
272000	0594-0103000A	SURFACE PREPARATION	1	LS
273000	0594-0104000A	COATING APPLICATION	1	LS
274000	0594-0105000A	COATING MATERIALS	1	LS
275000	0599-0100000J	CONCRETE SLOPE PAVING	1,030	SQ F
276000	929	POTENTIAL FOUNDATION IMPROVEMENT (BENT 9)	1	EACH
		<b>597 - Bridge No. XXXXX (Clackamas Pedestrian Bridge)</b>		
278000	0510-0100000A	SHORING, CRIBBING, AND COFFERDAMS	1	LS
279000	0510-0101000A	STRUCTURE EXCAVATION	50	CUYD
280000	0510-0108000A	GRANULAR STRUCTURE BACKFILL	20	CUYD
281000	0512-0100000A	FURNISH DRILLING EQUIPMENT	1	LS
282000	0512-0101000A	DRILLED SHAFT CONCRETE	80	CUYD
283000	0512-0104000A	DRILLED SHAFT REINFORCEMENT, GRADE 60	20,000	LB
284000	0512-0105000F	CSL TEST ACCESS TUBES	330	FOOT
285000	0512-0106000E	CSL TESTS	2	EACH
286000	0512-0111000F	DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	110	FOOT
287000	0520-0100000A	FURNISH PILE DRIVING EQUIPMENT	1	LS
288000	0520-0137000F	FURNISH PP 24 X 0.5 STEEL PILES	900	FOOT

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
8,925	126				75	50			
22,214	313				188	125			
33,299	469			422		47			
3,292	46			42		5			
1,740	25					25			
39,025	550				330	220			
7,860	111				66	44			
3,570	50				25	25			
29,489	415				208	208			
4,463	63				31	31			
1,785	25				13	13			
784	11				2	3			6
6,631	93				19	28			47
3,817	54				11	16			27
2,386	34				7	10			17
89,411	1,259			1,133		126			
7,667	108	86			16	5			
227,766	3,208	2,566			481	160			
3,784	53	43			8	3			
121,264	1,708	1,366			256	85			
8,121	114	91			17	6			
31,194	439	264			88	88			
335,628	4,727			2,836	945	945			
0	0								
0	0								
49,686	700	560			105	35			
78,414	1,104	884			166	55			
5,114	72	58			11	4			
5,186	73	58			11	4			
5,258	74	59			11	4			
5,253	74	59			11	4			
3,690	52	42			8	3			
34,657	488	342	49		73	24			
16,102	227	159	23		34	11			
14,948	211	147	21		32	11			
9,966	140	98	14		21	7			
2,491	35	25	4		5	2			
6,889	97	68	10		15	5			
77,619	1,093				547	547			
<b>0</b>	<b>0</b>								
10,196	144				101	43			
5,411	76				46	30			
720	10				6	4			
9,504	134				67	67			
6,616	93				28	65			
10,383	146			132		15			
1,123	16			14		2			
580	8				2	6			
7,219	102				31	71			
5,297	75				15	22			37
32,642	460				92	138			230

Biditem	Client #	Description	Bid Quantity	Unit
289000	0520-0322000E	DRIVE PP 24 X 0.5 STEEL PILES	12	EACH
290000	0520-0433000E	PP 24 X 0.5 STEEL PILE SPLICES	12	EACH
291000	0525-XX	BRIDGE LOWERING	1	LS
292000	0530-01040000	REINFORCEMENT, GRADE 60	610,000	LB
293000	0540-0203000A	DECK CONCRETE, CLASS HPC4000	290	CUYD
294000	0540-0302000A	GENERAL STRUCTURAL CONCRETE, CLASS 4000	1,100	CUYD
295000	0543-0100000J	ARCHITECTURAL TREATMENT	180	SQYD
296000	0555-0010100A	POST-TENSIONING	80,000	LS
297000	0581-0100000E	BRIDGE DRAINS	4	EACH
298000	0582-0010000E	BEARING DEVICES, BENT 1 & 3	12	EACH
299000	0583-0202000F	GRC CONDUIT SYSTEM, _____ INCH DIAMETER	580	FOOT
300000	0585-0210100A	TYPE "C" PREFORMED COMPRESSION JOINT SEALS	70	FOOT
301000	0587-0131000A	ORNAMENTAL RAIL WITH PEDESTRIAN HANDRAIL	570	FOOT
302000	0842-0401000E	BRIDGE IDENTIFICATION MARKERS	2	EACH
<b>598 - Retaining Walls &amp; Sound Walls</b>				
303000	0596-0108000A	RETAINING WALL, WALL 1 (CANTILEVER SOLDIER PILE)	2,175	SF
304000	0596-0108000A	RETAINING WALL, WALL 2a (CANTILEVER SOLDIER PILE)	5,066	SF
305000	0596-0108000A	RETAINING WALL, WALL 2b (ELIOT WALL, FOR DETAILS S	6,630	SF
306000	0596-0108000A	RETAINING WALL, WALL 3B (SOLDIER PILE WALL)	4,000	SF
307000	0596-0108000A	RETAINING WALL, WALL 3T (SOLDIER PILE WALL WITH LI	3,025	SF
308000	0596-0108000A	RETAINING WALL, WALL 3 (LIGHTWEIGHT BACKFILL)	1,500	CUYD
308050	0596-0108000A	RETAINING WALL, WALL 3 NCW (NORTH COVER WINGWA	2,540	SF
309000	0596-0108000A	RETAINING WALL, WALL 4 (CANTILEVER SOLDIER PILE/SE	3,650	SF
313000	0596-0108000A	RETAINING WALL, WALL 7 (CANTILEVER SOLDIER PILE)	4,435	SF
314000	0596-0108000A	RETAINING WALL, WALL 8 (SOLDIER PILE TIE-BACK)	6,350	SF
315000	0596-0108000A	RETAINING WALL, WALL 9 (SOLDIER PILE TIE-BACK)	7,715	SF
316000	0596-0108000A	RETAINING WALL, WALL 11 (MSE)	3,660	SF
317000	0596-0108000A	RETAINING WALL, WALL 11a (MSE)	558	SF
318000	0596-0108000A	RETAINING WALL, WALL 11b (MSE)	1,474	SF
319000	0596-0108000A	RETAINING WALL, WALL 12 (CANTILEVER SOLDIER PILE)	6,965	SF
320000	0596-0108000A	RETAINING WALL, WALL 13 (CANTILEVER SOLDIER PILE)	5,515	SF
321000	0596-0108000A	RETAINING WALL, WALL 14 (SOLDIER PILE DEADMAN W/	5,900	SF
321100	0596-0108000A	RETAINING WALL, WALL 14 (LIGHTWEIGHT FILL)	670	CY
322000	0596-0108000A	RETAINING WALL, WALL 15 (SOLDIER PILE DEADMAN W/	10,860	SF
322100	0596-0108000A	RETAINING WALL, WALL 15 (LIGHTWEIGHT FILL)	1,540	CY
323000	0596-0108000A	RETAINING WALL, WALL 16 (MSE)	1,873	SF
324000	0596-0108000A	RETAINING WALL, WALL 19 (CIP)	1,660	SF
325000	0596-0108000A	RETAINING WALL, WALL 20 (MSE)	2,867	SF
327000	0596-0108000A	RETAINING WALL, WALL 22 (DOUBLE MSE)	1,644	SF
328000	0596-0108000A	RETAINING WALL, WALL 23 (DOUBLE MSE)	1,644	SF
329000	0597-0100000J	SOUND WALL, WALL 24	23,276	SF
330000	0597-0100000J	SOUND WALL, WALL 25	38,500	SF
<b>599 - TEMPORARY STRUCTURES &amp; PAVING</b>				
331000	0350-0105000J	SUBGRADE GEOTEXTILE	32,474	SQYD
332000	05XX-	BROADWAY SHOOFLY TEMPORARY BRIDGE(WB)	6,400	SQFT
333000	0641-0102000M	AGGREGATE BASE	21,649	TON
334000	0745-0302000M	LEVEL 3, 1/2 INCH ACP	15,176	TON
334100	0759-0128000J	CONCRETE WALKS	14,955	SF
335000	0745-0620000M	PG 64-22 ASPHALT IN LEVEL 3, 1/2 INCH ACP	911	TON
<b>600 - BASES</b>				
336000	0620-0113000J	COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	15,736	SQYD
337000	0641-0102000M	AGGREGATE BASE	45,044	TON
<b>700 - WEARING SURFACES</b>				
338000	0730-0100000M	EMULSIFIED ASPHALT FOR TACK COAT	33	TON
339000	0745-0302000M	LEVEL 3, 1/2 INCH ACP	24,909	TON

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
11,618	164				33	49			82
5,810	82				16	25			41
27,666	390	312			58	19			
254,230	3,581			3,223		358			
124,999	1,761	1,408			264	88			
604,451	8,513	6,811			1,277	426			
8,453	119	95			18	6			
66,002	930			837		93			
18,454	260	208			39	13			
16,669	235	188			35	12			
6,212	87							87	
6,248	88	70			13	4			
40,698	573			573					
160	2	2							
<b>598 - Retaining Walls &amp; Sound Walls</b>									
110,648	1,558	623	78	156	312	390			
283,851	3,998	1,599	200	400	800	999			
1,435,489	20,218	8,087	1,011	2,022	4,044	5,055			
267,864	3,773	1,509	189	377	755	943			
461,228	6,496	2,598	325	650	1,299	1,624			
87,019	1,226	490	61	123	245	306			
290,848	4,096	1,639	205	410	819	1,024			
486,063	6,846	2,738	342	685	1,369	1,711			
232,773	3,278	1,311	164	328	656	820			
293,350	4,132	1,653	207	413	826	1,033			
346,470	4,880	1,952	244	488	976	1,220			
210,055	2,959	1,183	148	296	592	740			
21,090	297	119	15	30	59	74			
50,592	713	285	36	71	143	178			
325,135	4,579	1,832	229	458	916	1,145			
283,652	3,995	1,598	200	400	799	999			
391,666	5,516	2,207	276	552	1,103	1,379			
39,226	552	221	28	55	110	138			
550,795	7,758	3,103	388	776	1,552	1,939			
85,662	1,207	483	60	121	241	302			
77,759	1,095	219			548	329			
77,613	1,093	437	55	109	219	273			
106,600	1,501	300			751	450			
60,302	849	170			425	255			
60,302	849	170			425	255			
241,417	3,400			170	2,380	850			
513,669	7,235			362	5,064	1,809			
<b>599 - TEMPORARY STRUCTURES &amp; PAVING</b>									
0	0								
22,529	317				190	127			
520,964	7,338	2,935			2,935	1,468			
227,066	3,198				320	959	1,919		
456,002	6,423				1,285	3,211	1,927		
62,649	882	441	265		176				
171,045	2,409				482	1,205	723		
<b>600 - BASES</b>									
0	0								
39,423	555					222	333		
513,894	7,238				724	2,171	4,343		
<b>700 - WEARING SURFACES</b>									
0	0								
6,716	95				19	47	28		
578,013	8,141				1,628	4,071	2,442		

Biditem	Client #	Description	Bid Quantity	Unit
340000	0745-0402000M	LEVEL 4, 1/2 INCH ACP	9,224	TON
341000	0745-0620000M	PG 64-22 ASPHALT IN _____ ACP	1,495	TON
342000	0745-0640100M	PG 70-22ER ASPHALT IN _____ ACP	553	TON
343000	0755-0105000J	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT 12 I	62,722	SQYD
344000	0756-0115000J	PLAIN CONCRETE PAVEMENT, DOWELED, 12 INCHES THIC	127	SQYD
345000	0759-0110000F	CONCRETE CURBS, STANDARD CURB	14,256	FOOT
346000	0759-0122000J	CONCRETE ISLANDS	2,222	SQFT
347000	0759-0126000J	CONCRETE DRIVEWAYS	7,627	SQFT
348000	0759-0128000J	CONCRETE WALKS	204,452	SQFT
349000	0759-0150000K	CONCRETE STAIRS	122	CUYD
350000	0759-0154100E	EXTRA FOR NEW CURB RAMPS	118	EA
351000	1069-0100000F	METAL HANDRAIL, _____ RAILS	2,407	FOOT
352000	0759-0147000J	PATTERNED CONCRETE SURFACING	5,855	SQFT
353000	0759-0510000E	TRUNCATED DOMES ON NEW SURFACES	576	SQFT
354000	0759-0800000J	BUS PADS	3,798	SQFT
		<b>800 - PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES</b>		
356000	0820-0127000F	CONCRETE BARRIER, TALL	23,542	FOOT
357000	0830-0125000E	IMPACT ATTENUATOR, TYPE L	6	EA
358000	0842-0401000E	BRIDGE IDENTIFICATION MARKERS	0	EA
359000	0865-0116500F	METHYL METHACRYLATE, EXTRUDED, SURFACE, PROFILE	57,439	FOOT
360000	0860-0200000F	LONGITUDINAL PAVEMENT MARKINGS - PAINT	7,688	FOOT
361000	0867-0103500E	PAVEMENT LEGEND, TYPE AB: ARROWS	120	EA
362000	0867-0145500J	PAVEMENT BAR: TYPE AB	9,616	SQFT
363000	0868-0200000J	GREEN BICYCLE LANE, METHYL METHACRYLATE	35,376	SQFT
364000	0868-0310000J	RED TRANSIT LANE, METHYL METHACRYLATE	534	SQFT
365000	0865-0160000F	THERMOPLASTIC, EXTRUDED OR SPRAYED, SURFACE, NO	14,623	FOOT
		<b>900 - PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS</b>		
366000	09XX-	SIGNING (LOCAL STREETS, SEE TAB 900 FOR DETAILS)	1	LS
367000	09XX-	SIGNING (MINOR FREEWAY, SEE TAB 900 FOR DETAILS)	1	LS
368000	09XX-	REMOVAL OF EXISTING OVERHEAD SIGN STRUCTURE	17	EA
369000	0930-0101000A	TRUSS SIGN BRIDGE	5	EA
370000	0930-0103000A	BUTTERFLY SIGN STRUCTURES	3	EA
371000	0930-0104000A	MONOTUBE CANTILEVER SIGN STRUCTURES	5	EA
372000	0930-0105000A	BRIDGE STRUCTURE MOUNTS	9	EA
373000	0930-0109000A	VERTICAL SIGN MOUNTS ON EXISTING STRUCTURES	1	EA
374000	0940-	SIGNING (OVERHEAD, SEE TAB 900 FOR DETAILS)	8,880	SQFT
375000	0950-0101000A	REMOVAL OF ELECTRICAL SYSTEMS	5	EA
376000	0970-0104000A	ILLUMINATION (LOCAL STREETS) - COBRAHEAD LUMINAIR	71	EA
377000	0970-0104000A	ILLUMINATION (LOCAL STREETS) - DECORATIVE LUMINAIR	35	EA
378000	0970-0104000A	ILLUMINATION (LOCAL STREETS) - PEDESTRIAN LUMINAIR	25	EA
379000	0970-0105000A	ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT,	14,300	EA
380000	0970-0105000A	ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT,	3,900	EA
381000	0970-0100000A	ILLUMINATION (LOCAL STREETS) - COBRAHEAD POLE FOL	57	EA
382000	0970-0100000A	ILLUMINATION (LOCAL STREETS) - DECORATIVE POLE FOL	35	EA
383000	0970-0100000A	ILLUMINATION (LOCAL STREETS) - PEDESTRIAN POLE FOL	25	EA
384000	0970-0100000A	ILLUMINATION (LOCAL STREETS) - FREEWAY CAP POLE FC	14	EA
385000	0970-0100000A	ILLUMINATION (FREEWAY) - POLE FOUNDATIONS	102	EA
386000	0970-0104000A	ILLUMINATION (FREEWAY) - LUMINAIRES, LAMPS, AND B	102	EA
387000	0970-0105000A	ILLUMINATION (FREEWAY) - SWITCHING, CONDUIT, AND	18,380	FT
388000	0970-0200000A	ILLUMINATION (FREEWAY) - LIGHTING POLES AND ARMS	102	EA
389000	0970-0104000A	ILLUMINATION (TUNNEL) - TUNNEL LUMINAIRES, LAMPS	980	EA
390000	0970-0105000A	ILLUMINATION (TUNNEL) - TUNNEL LUMINAIRES, SWITCH	5,200	FT
391000	0990-0101000A	TRAFFIC SIGNAL INSTALLATION, _____	8	EA
392000	0990-0102000A	TRAFFIC SIGNAL MODIFICATION, _____	3	EA
393000	0990-0104000A	RAMP METER SIGNAL INSTALLATION, _____	2	EA

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
214,043	3,015				603	1,507	904		
280,832	3,955				791	1,978	1,187		
103,880	1,463				293	732	439		
2,597,560	36,585		9,146	9,146	7,317	10,976			
6,947	98		24	24	20	29			
154,777	2,180	1,090	654		436				
7,996	113	56	34		23				
39,977	563	282	169		113				
705,707	9,940	4,970	2,982		1,988				
50,372	709	355	213		142				
85,909	1,210	605	363		242				
45,113	635			381	254				
49,476	697	348	209		139				
6,330	89	45	27		18				
15,506	218	109	66		44				
<b>0</b>	<b>0</b>								
766,117	10,790	7,553	1,079		1,619	540			
37,485	528	370	53		79	26			
0	0								
51,264	722	505	72		108	36			
1,372	19					19			
10,710	151					151			
5,150	73					73			
31,573	445	311	44		67	22			
477	7	5	1		1	0			
7,831	110					110			
<b>0</b>	<b>0</b>								
8,033	113				68	45			
8,925	126				75	50			
88,907	1,252				751	501			
190,785	2,687				1,612	1,075			
50,402	710				426	284			
97,392	1,372				823	549			
67,642	953				572	381			
5,659	80				48	32			
48,688	686				411	274			
22,313	314				189	126			
38,021	536				107	107		321	
24,990	352				70	70		211	
13,388	189				38	38		113	
51,051	719				144	144		431	
20,885	294				59	59		176	
15,262	215				43	43		129	
9,371	132				26	26		79	
5,801	82				16	16		49	
3,749	53				11	11		32	
27,311	385				77	77		231	
23,669	333				67	67		200	
82,021	1,155				231	231		693	
30,952	436				87	87		262	
437,325	6,160				1,232	1,232		3,696	
32,487	458				92	92		275	
357,000	5,028				1,006	1,006		3,017	
13,388	189				38	38		113	
14,280	201				40	40		121	

Biditem	Client #	Description	Bid Quantity	Unit
394000	0990-0105000A	INTERCONNECT SYSTEM (LOCAL STREETS) - LENGTH OF C	14,200	FT
394500	0990-	INTERCONNECT SYSTEM (LOCAL STREETS) - NETWORK EC	8	EA
395000	0990-0105000A	INTERCONNECT SYSTEM (FREEWAY) (SEE TAB 900 FOR DE	10,900	FT
396000	0990-	ITS INSTALLATION - VMS (LARGE)	2	EA
397000	0990-	ITS INSTALLATION - VMS (SMALL FOR FLS)	6	EA
398000	0990-	ITS INSTALLATION - CCTV (CAMERA)	8	EA
399000	0990-	ITS INSTALLATION - NETWORK EQUIPMENT	15	EA
400000	0990-	ITS INSTALLATION - RADAR	2	EA
401000	0990-	ITS INSTALLATION - EXISTING RADAR RE-INSTALL	3	EA
402000	0990-	ITS INSTALLATION - CAMERA POLES	2	EA
403000	0990-	ITS INSTALLATION - CANITLEVER SUPPORTS	1	EA
404000	0990-	ITS INSTALLATION - GUIDE SIGN SUPPORTS	2	EA
405000	0990-	ITS INSTALLATION - COVER MOUNT	2	EA
406000	0990-	ITS INSTALLATION - LANE MANAGEMENT SIGNS FOR FLS	14	EA
		<b>OTHER</b>		
407000	8000-9Z90001	STREETCAR - REMOVAL OF STREETCAR	1	LS
408000	8000-9Z90001	STREETCAR - CONSTRUCT EMBEDDED TRACK (TEMPORAR	1,554	TF
410000	8000-9Z90001	STREETCAR - INSTALL OCS (TEMPORARY)	1	LS
411000	8000-9Z90001	STREETCAR - SIGNAL PRE-EMPTS MODIFICATION (TEMPO	5	EA
412000	8000-9Z90001	STREETCAR - BUS SHUTTLE (TEMPORARY)	20	DAY
413000	8000-9Z90001	STREETCAR - CONSTRUCTION EMBEDDED TRACK (PERMA	1,741	TF
414000	8000-9Z90001	STREETCAR - INSTALL OCS (PERMANENT)	1	LS
415000	8000-9Z90002	STREETCAR - COLD PLANE PAVEMENT REMOVAL, 2-6 INC	962	SQYD
416000	8000-9Z90003	STREETCAR - LEVEL 4, 1/2 INCH ACP	217	TON
417000	8000-9Z90004	STREETCAR - PG 70-22 ASPHALT IN _____ ACP	13	TON
418000	8000-9Z90005	STREETCAR - CONCRETE CURBS, STANDARD CURB	679	FOOT
419000	8000-9Z90006	STREETCAR - CONCRETE WALKS	6,631	SQFT
420000	0865-0160000F	STREETCAR - THERMOPLASTIC, EXTRUDED OR SPRAYED, S	668	FOOT
421000	0867-0103500E	STREETCAR - PAVEMENT LEGEND, TYPE AB: ARROWS	0	EA
422000	0867-0145500J	STREETCAR - PAVEMENT BAR: TYPE AB	180	SQFT
423000	8000-9Z90001	LIGHT RAIL - INSTALL OCS	1	LS
424000	8000-9Z90001	LIGHT RAIL - BUS SHUTTLE	21	DAY
425000	8000-9Z90001	BUS STOP	0	EA
426000	8000-9Z90001	56 INCH CSO RELOCATION (HANCOCK)	1	LS
		<b>1000 - RIGHT OF WAY DEVELOPMENT AND CONTROL</b>		
427000	1010-0100000A	WATER QUALITY STRUCTURE	1	LS
428000	1012-0100000A	WATER QUALITY SWALE	1	LS
429000	1015-9Z90000	WATER QUALITY PLANTERS	1	LS
430000	1030-0101000R	WEED CONTROL	5	ACRE
431000	1030-0108000R	PERMANENT SEEDING	5	ACRE
432000	1040-9Z90008	LANDSCAPING & TREES	1	LS
433000	1040-9Z90009	ARCHITECTURAL TREATMENT	1	LS
		Total		

Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician	Pilebuck
70,972	1,000				200	200		600	
21,420	302				60	60		181	
77,826	1,096				219	219		658	
89,250	1,257				251	251		754	
107,100	1,508				302	302		905	
35,700	503				101	101		302	
26,775	377				75	75		226	
7,140	101				20	20		60	
4,016	57				11	11		34	
3,570	50				10	10		30	
2,678	38				8	8		23	
1,785	25				5	5		15	
1,785	25				5	5		15	
16,244	229				46	46		137	
<b>0</b>	<b>0</b>								
123,038	1,733				866	866			
202,141	2,847	1,424	285	569	569				
68,946	971	486	194		291				
5,355	75							75	
75,139	1,058				317	741			
227,662	3,207	1,603	321	641	641				
77,692	1,094	547	219		328				
3,319	47				23	23			
5,035	71				35	35			
2,442	34				17	17			
10,335	146	73	44		29				
25,774	363	182	109		73				
119	2					2			
0	0								
64	1					1			
56,228	792					792			
78,896	1,111				333	778			
0	0				0	0			
193,031	2,719				1,359	1,359			
<b>0</b>	<b>0</b>								
86,507	1,218	731			487				
115,498	1,627				813	813			
151,487	2,134				1,067	1,067			
1,160	16				16				
3,570	50					50			
4,641,000	65,366				39,220	19,610	6,537		
2,320,500	32,683	9,805	6,537	3,268	13,073				
99,096,312	1,395,723	283,079	46,546	103,557	440,911	320,888	135,054	48,045	17,642

## **Chapter 2**

### **Appendix C: 30% EWP Greensheet Subcontracting and Workforce**

Note: values listed in this appendix are preliminary numbers prior to reconciliation. All values are subject to change.

Appendix C: 30% EWP Greensheet Subcontracting

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
<b>200 - Temp Features and Appurtenaces</b>										
MOBILIZATION	LS	1	7,101,435.39	7,101,435	2,485,502	2,485,502				
TRAINING	HOUR	20000	18		0			0	0	0
TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	2,504,924.94	2,504,925	1,878,694	1,690,824		187,869	150,295	
TEMPORARY ILLUMINATION (FREEWAY)	LS	1	250,000.00	250,000	250,000	250,000				
EROSION CONTROL	LS	1	510,120.64	510,121	255,060	255,060				
HAZMAT PLAN	LS	1	25,000.00	25,000	18,750					
CONTAMINATED SOIL MANAGEMENT	CUYD	7340	97.33	714,402	714,402	535,802				
<b>300 - Roadwork</b>										
				<b>0.00</b>						
CONSTRUCTION SURVEY WORK	LS	1	995,194.54	995,195	497,597	348,318		149,279		149,279
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	481,894.84	481,895	481,895	120,474				
CLEARING AND GRUBBING	ACRE	1	129,324.42	64,662	32,331	32,331				
GENERAL EXCAVATION	CUYD	2344	35.96	84,279	84,279	84,279				
<b>400 - Drainage and Sewers</b>										
12 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	705	416.97	293,964	293,964	293,964				
15 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	223	412.75	92,043	92,043	92,043				
CONCRETE STORM SEWER MANHOLES	EA	5	50,307.49	251,537	251,537	251,537				
CONCRETE MANHOLES, STORM SEWER POLLUTION CONTROL	EA	2	67,253.93	134,508	134,508	134,508				
CONCRETE INLETS, TYPE D	EA	1	8,186.43	8,186	8,186	8,186				
CONCRETE INLETS, TYPE BEEHIVE OVERFLOW	EA	4	6,989.31	27,957	27,957	27,957				
CONNECTION TO EXISTING STRUCTURES	EA	5	7,142.72	35,714	35,714	35,714				
<b>510 - Bridge Nos. 16358 (NB Hwy 1 Conn to N Greeley Ave over City Streets)</b>										
CONCRETE REPAIR	SQYD	1	4,000.00	4,000	4,000	4,000				
STRIP SEALS	FT	30	58.46	1,754						
CLEAN AND REPAIR DECK DRAINS	EA	3	1,071.46	3,214						
<b>515 - Bridge Nos. 08958E (Hwy 1 NB to Hwy 61 SB over Conn (E Fremont Intchg))</b>										
BRIDGE REMOVAL WORK	SQFT	1589	89.84	142,749	142,749		71,375			
SHORING, CRIBBING, AND COFFERDAMS	LS	1	70,592.94	70,593	17,648					
STRUCTURE EXCAVATION	CUYD	331	47.35	15,673	3,135	3,135				
Granular Structural Backfill	CUYD	32	226.78	7,257						
FURNISH MICROPILE EQUIPMENT	LS	1	100,000.00	100,000	100,000					
MICROPILES	EACH	36	10,567.45	380,428	380,428	38,043				
MICROPILE VERIFICATION LOAD TEST	EACH	1	25,000.00	25,000	25,000	2,500				
MICROPILE PROOF LOAD TEST	EACH	4	5,000.00	20,000	20,000	2,000				
REINFORCEMENT, GRADE 60	LB	345641	1.40	484,348	435,914		435,914			
CONCRETE AND CRACK SEALER	SQFT	13230	5.15	68,150						
FOUNDATION CONCRETE, CLASS 3300	CUYD	80	653.50	52,280						
DECK CONCRETE, CLASS HPC4500	CUYD	213	2,489.17	530,193						
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	484	2,844.82	1,376,895						



Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
SAW CUT TEXTURING	SQYD	628	7.80	4,896	4,896					
CONCRETE REPAIR	SQYD	30	4,000.00	120,000						
BRIDGE DRAINS	EACH	3	14,033.51	42,101						
BEARING DEVICES, _____	EACH	2	2,805.90	5,612						
2 INCH ELECTRICAL CONDUIT	FOOT	1420	25.00	35,500	35,500	35,500				
MODULAR BRIDGE JOINT SYSTEMS	FOOT	36	670.55	24,140						
GLAND REPLACEMENT FOR MODULAR BRIDGE JOINT SYSTEMS	FOOT	110	201.83	22,202						
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	710	218.28	154,976						
CLEAN AND REPAIR DECK DRAINS	EACH	5	649.51	3,248						
BIRD DETERRENT DEVICES	LS	1	5,000.00	5,000						
Construction Access and Restoration	LS	1	48,127.06	48,127	48,127	48,127				
<b>520 - Bridge Nos. N8958A (Fremont Viaduct, Hwy 1 NB)</b>				<b>0.00</b>						
BRIDGE REMOVAL WORK	SQFT	2796	83.34	233,030	233,030		116,515			
SHORING, CRIBBING, AND COFFERDAMS	LS	1	223,411.85	223,412	223,412					
STRUCTURE EXCAVATION	CUYD	729	40.62	29,609	5,922	5,922				
GRANULAR WALL BACKFILL	CUYD	5	160.63	803	161	161				
GRANULAR STRUCTURE BACKFILL	CUYD	65	98.31	6,390						
FURNISH MICROPILE EQUIPMENT	LS	1	220,000.00	220,000	220,000					
MICROPILES	EACH	67	10,637.01	712,680	712,680	71,268				
MICROPILE VERIFICATION LOAD TEST	EACH	1	25,000.00	25,000	25,000	2,500				
MICROPILE PROOF LOAD TEST	EACH	15	5,000.00	75,000	75,000	7,500				
REINFORCEMENT, GRADE 60	LB	290445	1.71	495,594	446,035		446,035			
FOUNDATION CONCRETE, CLASS 3300	CUYD	120	967.49	116,099						
DECK CONCRETE, CLASS HPC4500	CUYD	320	3,127.50	1,000,800						
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	270	2,360.18	637,250						
SAW CUT TEXTURING	SQYD	1287	8.17	10,509	10,509					
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	41	459.49	18,839						
MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	FOOT	996	563.87	561,617						
BI51 PRECAST PRESTRESSED GIRDERS	FOOT	162	419.87	68,019						
STEEL PLATE GIRDER	LS	134000	4.15	555,542						
BRIDGE DRAINS	EACH	6	14,033.39	84,200						
BEARING DEVICES, _____	EACH	48	2,805.90	134,683						
2 INCH ELECTRICAL CONDUIT	FOOT	1840	25.00	46,000	46,000	46,000				
POURED JOINT SEALS	LF	259	30.00	7,770						
TYPE "F" CONCRETE RAIL, 42 INCH	LS	920	212.25	195,267						
CLEAN AND REPAIR DECK DRAINS	EA	12	591.17	7,094						
BENT 18 CROSSBEAM STRENGTHENING	LS	1	34,751.57	34,752						
CONCRETE SLOPE PAVING	SQFT	1063	23.33	24,796						
Surface Preparation	LS	1	5,000.00	5,000						
Coating Application	LS	1	5,000.00	5,000	5,000	5,000				
Coating Materials	LS	1	5,000.00	5,000	5,000	5,000				
Construction Access and Restoration	LS	1	219,860.21	219,860	219,860	219,860				
<b>598 - Retaining Walls &amp; Sound Walls</b>				<b>0.00</b>						
RETAINING WALL, WALL 1 (CANTILEVER SOLDIER PILE)	SF	2488	218.40	543,384	543,384			543,384	163,015	108,677
RETAINING WALL, WALL 1 (LIGHTWEIGHT FILL)	CUYD	1734	192.84	334,392	334,392			334,392	100,318	66,878
RETAINING WALL, WALL 2a (CANTILEVER SOLDIER PILE)	SF	5361	266.50	1,428,705	1,428,705			1,428,705	428,611	285,741

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
SOUND WALL, WALL 24	SF	5904	75.00	442,800	442,800			442,800	221,400	88,560
<b>600 - BASES</b>				<b>0.00</b>						
COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	SQYD	352	18.53	6,523	3,261	3,261				
AGGREGATE BASE	TON	522	109.25	57,029	28,514	28,514				
<b>700 - WEARING SURFACES</b>				<b>0.00</b>						
EMULSIFIED ASPHALT FOR TACK COAT	TON	1	650.00	650	650	650				
LEVEL 3, 1/2 INCH ACP	TON	192	161.04	30,920	30,920	30,920				
LEVEL 4, 1/2 INCH ACP	TON	233	156.46	36,455	36,455	36,455				
PG 64-22 ASPHALT IN _____ ACP	TON	11	600.00	6,600	6,600	6,600				
PG 70-22ER ASPHALT IN _____ ACP	TON	14	555.00	7,770	7,770	7,770				
CONCRETE CURBS, CURB AND GUTTER	FOOT	12	240.59	2,887	2,887	2,887				
CONCRETE CURBS, STANDARD CURB	FOOT	501	49.08	24,587	24,587	24,587				
CONCRETE WALKS	SQFT	4198	14.37	60,329	60,329	60,329				
EXTRA FOR NEW CURB RAMPS	EA	1	3,855.05	3,855	3,855	3,855				
TRUNCATED DOMES ON NEW SURFACES	SQFT	12	36.00	432	432	432				
<b>800 - PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES</b>				<b>0.00</b>						
IMPACT ATTENUATOR, TYPE L	EA	2	40,000.00	80,000	80,000		80,000			
LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	340	1.50	510	510					
PAVEMENT BAR: TYPE AB	SQFT	200	12.00	2,400	2,400					
<b>900 - PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS</b>				<b>0.00</b>						
SIGNING (MINOR FREEWAY, SEE TAB 900 FOR DETAILS)	LS	1	25,000.00	25,000	25,000	25,000				
REMOVAL OF EXISTING OVERHEAD SIGN STRUCTURE	EA	4	30,000.00	120,000	120,000		120,000			
TRUSS SIGN BRIDGE	EA	2	223,000.00	446,000	446,000		446,000			
MONOTUBE CANTILEVER SIGN STRUCTURES	EA	1	125,000.00	125,000	125,000		125,000			
BRIDGE STRUCTURE MOUNTS	EA	3	45,000.00	135,000	135,000		135,000			
SIGNING (OVERHEAD, SEE TAB 900 FOR DETAILS)	SQFT	4950	34.00	168,300	168,300		168,300			
ILLUMINATION (LOCAL STREETS) - DECORATIVE LUMINAIRES: LAMPS, BALLASTS, POLES AND ARMS	EA	3	4,400.00	13,200	13,200	13,200				
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT,	EA	3	20.00	60	60	60				
ILLUMINATION (LOCAL STREETS) - DECORATIVE POLE FOUNDATIONS	EA	3	1,650.00	4,950	4,950	4,950				
ILLUMINATION (FREEWAY) - POLE FOUNDATIONS	EA	13	1,650.00	21,450	21,450	21,450				
ILLUMINATION (FREEWAY) - LUMINAIRES, LAMPS, AND BALLASTS	EA	13	1,430.00	18,590	18,590	18,590				
ILLUMINATION (FREEWAY) - SWITCHING, CONDUIT, AND WIRING	FT	3000	30.00	90,000	90,000	90,000				
ILLUMINATION (FREEWAY) - LIGHTING POLES AND ARMS	EA	13	1,870.00	24,310	24,310	24,310				
INTERCONNECT SYSTEM (FREEWAY) (SEE TAB 900 FOR DETAILS)	FT	6200	40.00	248,000	248,000	248,000				
<b>1000 - RIGHT OF WAY DEVELOPMENT AND CONTROL</b>				<b>0.00</b>						
WATER QUALITY STRUCTURE	LS	1	64,954.82	64,955	64,955	64,955				
WATER QUALITY SWALE	LS	1	39,879.57	39,880	39,880	39,880				
WATER QUALITY PLANTERS	LS	1	54,052.26	54,052	54,052	54,052				
WEED CONTROL	ACRE	1	1.00	1	1	1				
PERMANENT SEEDING	ACRE	1	4,000.00	2,000	2,000	2,000				
ARCHITECTURAL TREATMENT	LS	1	433,610.00	433,610	216,805	97,562				
_____ CHAIN LINK FENCE WITH _____	FOOT	158	30.00	4,740	4,740	4,740				

**PACKAGE B**

200 - Temp Features and Appurtenances

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
MOBILIZATION	LS	1	17,171,624.86	17,171,625	6,010,069	4,207,048		601,007	300,503	120,201
TRAINING	HOUR	100000		0	0	0		0	0	
TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	10,019,699.78	10,019,700	7,514,775	6,500,280		1,014,495		710,146
RAILROAD FLAGGER SERVICES	EACH	1	507,000.00	507,000	507,000					
TEMPORARY ILLUMINATION (LOCAL STREETS)	LS	1	15,000.00	15,000	15,000	15,000				
TEMPORARY ILLUMINATION (FREEWAY)	LS	1	250,000.00	250,000	250,000	250,000				
TEMPORARY TRAFFIC SIGNAL	EA	1	54,999.99	55,000	55,000	55,000				
EROSION CONTROL	LS	1	3,217,283.06	3,217,283	3,217,283	1,447,777		321,728		
HAZMAT PLAN	LS	1	25,000.00	25,000	18,750					
CONTAMINATED SOIL MANAGEMENT	CUYD	29260	97.07	2,840,268	2,840,268	1,420,134				
<b>300 - Roadwork</b>										
CONSTRUCTION SURVEY WORK	LS	1	2,098,611.19	2,098,611	1,049,306		944,375			104,931
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	825,045.33	825,045	825,045	412,523				
CLEARING AND GRUBBING	ACRE	2	45,048.63	90,097	45,049	45,049				
GENERAL EXCAVATION	CUYD	11230	59.32	666,175	333,088	333,088				
12 INCH SUBGRADE STABILIZATION	SQYD	7190	28.62	205,778	102,889	102,889				
SUBGRADE GEOTEXTILE	SQYD	9585	4.52	43,324	21,662	21,662				
<b>400 - Drainage and Sewers</b>										
12 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	829	431.91	358,052	358,052	358,052				
18 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	400	408.14	163,256	163,256	163,256				
CONCRETE STORM SEWER MANHOLES	EA	3	51,518.29	154,555	154,555	154,555				
CONCRETE INLETS, TYPE CG-2	EA	3	7,779.94	23,340	23,340	23,340				
CONCRETE INLETS, TYPE CG-3	EA	1	8,524.92	8,525	8,525	8,525				
CONCRETE INLETS, TYPE G-2	EA	7	7,709.95	53,970	53,970	53,970				
CONCRETE INLETS, TYPE BEEHIVE OVERFLOW INLET	EA	2	7,263.82	14,528	14,528	14,528				
ADJUSTING INLETS	EA	4	923.45	3,694	3,694	3,694				
CONNECTION TO EXISTING STRUCTURES	EA	7	7,142.72	49,999	49,999	49,999				
<b>570 - Bridge Nos. 08583 (Hwy 1 over NE Hassalo St &amp; NE Holladay St)</b>										
BRIDGE REMOVAL WORK	SQFT	2488	93.69	233,095	233,095		116,547			
CLASS 2 PREPARATION	SQYD	2390	140.82	336,587	302,928	269,269				
Shoring, Cribbing, and Cofferdams	LS	1	136,000.00	136,000						
STRUCTURE EXCAVATION	CUYD	212	46.47	9,851	1,970	1,970				
GRANULAR STRUCTURE BACKFILL	CUYD	500	67.04	33,520	6,704	6,704				
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	300,000					
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	456	825.27	376,322	376,322	75,264				
PERMANENT SHAFT CASINGS, 60 INCH DIAMETER	FOOT	456	1,147.37	523,200	523,200					
DRILLED SHAFT CONCRETE	CUYD	332	567.64	188,237	188,237	37,647				
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	165806	1.64	271,166	244,049		244,049			
CSL TEST ACCESS TUBES	FOOT	2520	13.45	33,905	33,905					
CSL TESTS	EACH	12	1,800.00	21,600	21,600					
FURNISH PILE DRIVING EQUIPMENT	LS	1	30,553.42	30,553						
DRIVE PP 16 X 0.5 STEEL PILES	EACH	22	3,576.75	78,689						
FURNISH PP 16 X 0.5 STEEL PILES	EACH	1243	136.56	169,748						
REINFORCEMENT, GRADE 60	LB	377748	1.52	574,434	516,990		516,990			
INJECT AND SEAL CRACKS	FOOT	1000	27.50	27,500	27,500	27,500				
FOUNDATION CONCRETE, CLASS 4000	CUYD	56	2,112.18	118,282						

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	318	1,766.98	561,901						
GENERAL STRUCTURAL CONCRETE, CLASS 5000	CUYD	67	4,675.80	313,278						
DECK CONCRETE, CLASS HPC4500	CUYD	659	1,987.50	1,309,764						
DECK CONCRETE, CLASS HPC4500	CUYD	299	969.40	289,621						
SAW CUT TEXTURING	SQYD	2250	7.00	15,750	15,750					
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	308	527.03	162,325						
MODIFIED WSDOT WF50G PRECAST PRESTRESSED GIRDERS	FOOT	480	506.61	243,171						
MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	FOOT	2142	526.00	1,126,699						
PHASE I SEISMIC UPGRADE	EACH	1	304,450.39	304,450	304,450					
BRIDGE DRAINS	EACH	4	13,821.70	55,287						
BRIDGE DRAIN DEBRIS REMOVAL	EACH	3	1,259.59	3,779						
BEARING DEVICES, _____	EACH	84	207.93	17,466						
TYPE "D" PREFORMED COMPRESSION JOINT SEALS	FOOT	1080	76.92	83,070						
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	FOOT	154	77.81	11,983						
POURED JOINT SEAL	FOOT	497	30.00	14,910						
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	878	196.51	172,532						
Concrete Slope Paving	SQFT	4,324.000	21.50	92,985	92,985	92,985				
7 Foot Metal Protective Fence	FOOT	878.000	350.00	307,300	307,300	307,300				
Removing and Rebuilding Fence	FOOT	26.000	350.00	9,100	9,100	9,100				
Construction Access and Restoration	LS	1.000	253,182.27	253,182	253,182	253,182				
<b>575 - Bridge No. 08588C (Hwy 1 SB to Hwy 2 EB over Hwy 1 and Conn (Banfield Intchg))</b>										
BRIDGE REMOVAL WORK	SQFT	909	71.37	64,879	64,879		32,440			
Shoring, Cribbing and Cofferdams	LS	1.000	182,822.57	182,823	182,823	182,823				
Structure Excavation	CUYD	436.000	57.27	24,968						
Granular Structure Backfill	CUYD	345.000	59.26	20,443						
DRILLED SHAFT CONCRETE	CUYD	25	583.33	14,583	14,583					
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	12726	1.66	21,178	19,060		19,060			
CSL TEST ACCESS TUBES	FOOT	195	14.23	2,775	2,775					
CSL TESTS	EACH	1	1,800.00	1,800	1,800					
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	35	737.81	25,823	25,823	5,165				
FURNISH MICROPILE EQUIPMENT	LS	1	100,000.00	100,000	100,000					
MICROPILES	EACH	32	10,265.54	328,497	328,497					
MICROPILE VERIFICATION LOAD TEST	EACH	2	25,000.00	50,000	50,000					
MICROPILE PROOF LOAD TEST	EACH	2	5,000.00	10,000	10,000					
FURNISH MICROPILE CASING	FOOT	540	45.00	24,300	24,300					
REINFORCEMENT, GRADE 60	LB	88192	1.72	151,643	136,478		136,478			
FOUNDATION CONCRETE, CLASS 4000	CUYD	102	691.41	70,524						
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	70	2,991.34	209,393						
DECK CONCRETE, CLASS HPC4500	CUYD	79	2,741.82	216,604						
SAW CUT TEXTURING	SQYD	272	8.84	2,404	2,404					
FURNISH MPCO MATERIAL	SQYD	40	20.00	800						
CONSTRUCT MPCO	SQYD	40	20.00	800						
STRUCTURAL CONCRETE OVERLAY MATERIAL	CUYD	5	194.25	971						
CONSTRUCT STRUCTURAL CONCRETE OVERLAY	SQYD	60	352.19	21,132						
STEEL PLATE GIRDER	LB	107558	4.26	458,126						
STEEL COLUMN JACKET	EACH	2	27,983.23	55,966						

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
CFRP STRENGTHENING - NEAR SURFACE MOUNTED	FOOT	360	25.00	9,000	9,000					
BRIDGE DRAINS	EACH	1	14,033.28	14,033						
BEARING DEVICES, BENT _____	EACH	8	4,037.31	32,299						
STRIP SEALS	FOOT	28	576.76	16,149						
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	272	228.33	62,106						
SURFACE PREPARATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING APPLICATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING MATERIALS	LS	1	5,000.00	5,000	5,000		5,000			
10 FT TYPE "D" PROTECTIVE FENCE	FOOT	60	400.00	24,000	24,000	24,000				
OTHER RAILROAD COSTS	LS	1	12,955.85	12,956						
Construction Access and Restoration	LS	1	47,764.70	47,765	47,765	47,765				
<b>580 - Bridge No. N8588E (Hwy 1 NB over UPRR)</b>										
TYPE "F" CONCRETE RAIL, RETROFIT	FOOT	1212	223.13	270,434						
<b>585 - Bridge No. S8588E (Hwy 1 SB over UPRR)</b>										
BRIDGE REMOVAL WORK	SQFT	2407	93.84	225,862	225,862		112,931			
Shoring, Cribbing, and Cofferdams	LS	1	308,127.98	308,128	308,128					
STRUCTURE EXCAVATION	CUYD	762	33.79	25,749	5,150	5,150				
GRANULAR STRUCTURE BACKFILL	CUYD	257	65.53	16,842	3,368	3,368				
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	300,000					
DRILLED SHAFT CONCRETE	CUYD	114	575.24	65,577	65,577					
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	56752	1.57	88,951	80,056		80,056			
CSL TEST ACCESS TUBES	FOOT	786	12.51	9,831	9,831					
CSL TESTS	EACH	4	1,800.00	7,200	7,200					
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	110	737.92	81,171	81,171	16,234				
DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	FOOT	18	1,098.04	19,765	19,765	3,953				
FURNISH MICROPILE EQUIPMENT	LS	1	140,000.00	140,000	140,000					
MICROPILES	EACH	42	10,419.51	437,620	437,620					
MICROPILE VERIFICATION LOAD TEST	EACH	3	25,000.00	75,000	75,000					
MICROPILE PROOF LOAD TEST	EACH	3	5,000.00	15,000	15,000					
FURNISH MICROPILE CASING	FOOT	630	45.00	28,350	28,350					
FURNISH PILE DRIVING EQUIPMENT	LS	1	10,515.74	10,516						
FURNISH PP 16 X 0.5 STEEL PILES	FOOT	250	149.26	37,315						
DRIVE PP 16 X 0.5 STEEL PILES	EACH	5	3,795.24	18,976						
REINFORCEMENT, GRADE 60	LB	390811	1.64	642,571	578,313		578,313			
FOUNDATION CONCRETE, CLASS 4000	CUYD	239	514.65	123,001						
DECK CONCRETE, CLASS HPC4500	CUYD	486	1,931.61	938,764						
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	334	1,465.07	489,333						
SAW CUT TEXTURING	SQYD	1750	21.13	36,970	36,970					
CONCRETE REPAIR	SQYD	404	4,000.00	1,616,000						
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	84	386.27	32,447						
21 INCH PRECAST PRESTRESSED SLABS	FOOT	270	567.19	153,142						
FURNISH MPCO MATERIAL	SQYD	453	20.00	9,060						
CONSTRUCT MPCO	SQYD	453	20.00	9,060						
STRUCTURAL CONCRETE OVERLAY MATERIAL	CUYD	48	194.25	9,324						
CONSTRUCT STRUCTURAL CONCRETE OVERLAY	SQYD	570	215.93	123,080						
STEEL PLATE GIRDER	LB	664431	3.92	2,604,048						

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
STEEL COLUMN JACKET	EACH	1	32,117.00	32,117						
CFRP STRENGTHENING - NEAR SURFACE MOUNTED	SQFT	4074	15.27	62,226						
BRIDGE DRAINS	EACH	2	14,033.63	28,067						
CLEAN EXISTING BRIDGE DRAINS	EACH	15	582.84	8,743						
RECONNECT DRAIN PIPES	EACH	4	1,679.01	6,716						
BEARING DEVICES, BENT _____	EACH	36	3,101.71	111,662						
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	FOOT	204	149.45	30,488						
STRIP SEALS	FOOT	132	416.66	55,000						
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	1269	217.99	276,627						
CONCRETE BARRIER, TALL	FOOT	267	125.50	33,508						
SURFACE PREPARATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING APPLICATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING MATERIALS	LS	1	5,000.00	5,000	5,000		5,000			
10 Ft Type "D" Protective Fence	FOOT	109	396.33	43,200	43,200	43,200				
Foundation Concrete, Class 3300	CUYD	14	1,982.66	27,757						
Construction Access and Restoration	LS	1	69,208.76	69,209	69,209	69,209				
<b>596 - Bridge No. 08588A (Hwy 2 WB to Hwy 1 NB over UPRR (Banfield Intchg))</b>										
BRIDGE REMOVAL WORK	SQFT	2291	43.00	98,515	98,515		49,258			
SHORING, CRIBBING, AND COFFERDAMS	LS	1	196,520.00	196,520	196,520					
STRUCTURE EXCAVATION	CUYD	340	77.84	26,466	26,466	5,293				
GRANULAR STRUCTURE BACKFILL	CUYD	106	72.65	7,701	1,540	308				
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	300,000					
DRILLED SHAFT CONCRETE	CUYD	193	564.65	108,977	108,977					
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	96633	1.52	147,272	132,544		132,544			
CSL TEST ACCESS TUBES	FOOT	1206	12.61	15,203	15,203					
CSL TESTS	EACH	6	1,800.00	10,800	10,800					
DRILLED SHAFT EXCAVATION, 72 INCH DIAMETER	FOOT	149	854.64	127,341	127,341	25,468				
DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	FOOT	20	1,096.25	21,925	21,925	4,385				
FURNISH MICROPILE EQUIPMENT	LS	1	140,000.00	140,000	140,000					
MICROPILES	EACH	28	10,425.89	291,925	291,925					
MICROPILE VERIFICATION LOAD TEST	EACH	2	25,000.00	50,000	50,000					
MICROPILE PROOF LOAD TEST	EACH	2	10,000.00	20,000	20,000					
FURNISH PILE DRIVING EQUIPMENT	LS	1	10,428.08	10,428						
FURNISH PP 16 X 0.5 STEEL PILES	FOOT	270	138.20	37,315						
DRIVE PP 16 X 0.5 STEEL PILES	EACH	5	3,767.84	18,839						
REINFORCEMENT, GRADE 60	LB	241061	1.70	410,723	369,651		369,651			
FOUNDATION CONCRETE, CLASS 3300	CUYD	105	561.22	58,928						
DECK CONCRETE, CLASS HPC4500	CUYD	334	2,468.54	824,492						
GENERAL STRUCTURAL CONCRETE, CLASS 3300	CUYD	15	1,564.52	23,468						
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	195	2,271.35	442,913						
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	55	517.01	28,435						
21 INCH PRECAST PRESTRESSED SLABS	FOOT	225	590.76	132,920						
STEEL PLATE GIRDER	LB	474600	4	1,983,828						
STEEL COLUMN JACKET	EACH	1	14,996.19	14,996						
BRIDGE DRAINS	EACH	5	14,033.56	70,168						
CLEAN EXISTING BRIDGE DRAINS	EACH	8	612.00	4,896						

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
BEARING DEVICES, BENT 2-9	EACH	49	3,974.81	194,766						
TYPE "A" PREFORMED COMPRESSION JOINT SEALS	LS	1	10,496.74	10,497						
TYPE "B" PREFORMED COMPRESSION JOINT SEALS	LS	1	11,923.38	11,923						
TYPE "C" PREFORMED COMPRESSION JOINT SEALS	LS	1	41,362.71	41,363						
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	LS	1	15,184.26	15,184						
STRIP SEALS	LS	1	33,058.02	33,058						
TYPE "F" CONCRETE RAIL, RETROFIT	FOOT	632	213.45	134,901						
TYPE "F" CONCRETE RAIL, 42-INCH	FOOT	471	195.93	92,283						
SURFACE PREPARATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING APPLICATION	LS	1	5,000.00	5,000	5,000		5,000			
COATING MATERIALS	LS	1	5,000.00	5,000	5,000		5,000			
CONCRETE SLOPE PAVING	SQFT	1030	22.75	23,435	23,435	23,435				
7 FOOT TYPE METAL PROTECTIVE FENCE	FOOT	45	350.00	15,750	15,750	15,750				
REMOVING AND REBUILDING FENCE	FOOT	57	350.00	19,950	19,950	19,950				
REMOVAL OF TRANSIENT ENCAMPMENTS AND SITE CLEAN-UP	LS	1	15,000.00	15,000	15,000	15,000				
Construction Access and Restoration	LS	1	93,315.76	93,316	93,316	93,316				
<b>598 - Retaining Walls &amp; Sound Walls</b>										
RETAINING WALL, WALL 7 (CANTILEVER SOLDIER PILE)	SF	2074	422.50	876,266	876,266			876,266	262,880	175,253
RETAINING WALL, WALL 12a (CANTILEVER SOLDIER PILE)	SF	1190	444.60	529,074	529,074			529,074	158,722	105,815
RETAINING WALL, WALL 12b (CANTILEVER SOLDIER PILE W/ TIE-B)	SF	5621	354.90	1,994,893	1,994,893			1,994,893	598,468	398,979
42 INCH TYPE "F" TRAFFIC BARRIER COPING WITH MOMENT SLAB	FOOT	120	616.99	74,039	74,039			74,039	22,212	14,808
RETAINING WALL, WALL 13a (CANTILEVER SOLDIER PILE)	SF	6532	278.20	1,817,208	1,817,208			1,817,208	545,162	363,442
RETAINING WALL, WALL 14 (CANTILEVER SOLDIER PILE W/ TIE-B)	SF	4878	338.00	1,648,764	1,648,764			1,648,764	494,629	329,753
RETAINING WALL, WALL 15 (CANTILEVER SOLDIER PILE W/ TIE-B)	SF	8677	278.20	2,413,942	2,413,942			2,413,942	724,183	482,788
SOUND WALL, WALL 25	SF	35360	75.00	2,652,000	2,652,000	2,652,000				
<b>600 - BASES</b>										
COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	SQYD	3190	11.70	37,317	18,659	18,659				
AGGREGATE BASE	TON	4514	71.84	324,286	162,143	162,143				
<b>700 - WEARING SURFACES</b>										
EMULSIFIED ASPHALT FOR TACK COAT	TON	3	650.00	1,950	1,950	975				
LEVEL 3, 1/2 INCH ACP	TON	1941	150.46	292,041	292,041	146,020				
LEVEL 4, 1/2 INCH ACP	TON	1047	163.65	171,278	171,278	85,639				
PG 64-22 ASPHALT IN _____ ACP	TON	116	600.00	69,600	69,600	34,800				
PG 70-22ER ASPHALT IN _____ ACP	TON	63	600.00	37,800	37,800	18,900				
PLAIN CONCRETE PAVEMENT REPAIR	SQYD	114	119.09	13,576						
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT 12 INCHES	SQYD	8484	178.68	1,515,989						
CONCRETE CURBS, STANDARD CURB	FOOT	1994	46.58	92,885	92,885	92,885				
CONCRETE CURBS, CURB AND GUTTER	FOOT	265	60.20	15,952	15,952	15,952				
CONCRETE DRIVEWAYS	SQFT	498	28.51	14,200	14,200	14,200				
CONCRETE WALKS	SQFT	26707	15.24	407,061	407,061	407,061				
EXTRA FOR NEW CURB RAMPS	EA	15	3,355.06	50,326	50,326	50,326				
PATTERNED CONCRETE SURFACING	SQFT	1154	35.41	40,863	40,863	40,863				
TRUNCATED DOMES ON NEW SURFACES	SQFT	194	36.00	6,972	6,972	6,972				
<b>800 - PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES</b>										
CONCRETE BARRIER, TALL	FOOT	4714	110.00	518,540	518,540		259,270			
IMPACT ATTENUATOR, TYPE L	EA	2	35,000.00	70,000	70,000		70,000			

Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
METHYL METHACRYLATE, EXTRUDED, SURFACE, PROFILED	FOOT	16789	5.00	83,945	83,945		83,945			
LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	5106	1.50	7,659	7,659	7,659				
PAVEMENT LEGEND, TYPE AB: ARROWS	EA	4	500.00	2,000	2,000	2,000				
PAVEMENT BAR: TYPE AB	SQFT	1100	12.00	13,200	13,200	13,200				
GREEN BICYCLE LANE, METHYL METHACRYLATE	SQFT	299	5.00	1,495	1,495	1,495				
RED TRANSIT LANE, METHYL METHACRYLATE	SQFT	551	5.00	2,756	2,756	2,756				
<b>900 - PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS</b>										
SIGNING (LOCAL STREETS, SEE TAB 900 FOR DETAILS)	LS	1	20,000.00	20,000	20,000	20,000				
SIGNING (MINOR FREEWAY, SEE TAB 900 FOR DETAILS)	LS	1	25,000.00	25,000	25,000	25,000				
REMOVAL OF EXISTING OVERHEAD SIGN STRUCTURE	EA	6	30,000.00	180,000	180,000		180,000			
TRUSS SIGN BRIDGE	EA	2	223,000.00	446,000	446,000		446,000			
MONOTUBE SIGN BRIDGE	EA	1	140,000.00	140,000	140,000		140,000			
MONOTUBE CANTILEVER SIGN STRUCTURES	EA	1	116,000.00	116,000	116,000		116,000			
BRIDGE STRUCTURE MOUNTS	EA	4	45,000.00	180,000	180,000		180,000			
VERTICAL SIGN MOUNTS ON EXISTING STRUCTURES	EA	1	30,000.00	30,000	30,000		30,000			
SIGNING (OVERHEAD, SEE TAB 900 FOR DETAILS)	SQFT	3230	34.00	109,820	109,820		109,820			
ILLUMINATION (LOCAL STREETS) - DECORATIVE LUMINAIRES: LAMPS, BALLASTS, POLES AND ARMS	EA	9	4,400.00	39,600	39,600	39,600				
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT, AND WIRING, AT-GRADE	EA	9	20.00	180	180	180				
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT, AND WIRING, IN CAP OR BRIDGE DECK	EA	66	30.00	1,980	1,980	1,980				
ILLUMINATION (LOCAL STREETS) - DECORATIVE POLE FOUNDATIONS	EA	9	1,650.00	14,850	14,850	14,850				
ILLUMINATION (LOCAL STREETS - FREEWAY UNDERDECK) - LUMINAIRES, LAMPS, AND BALLASTS	EA	66	400.00	26,400	26,400	26,400				
ILLUMINATION (FREEWAY) POLE FOUNDATIONS	EA	32	1,650.00	52,800	52,800	52,800				
ILLUMINATION (FREEWAY) LUMIN, LAMPS, AND BALLASTS	EA	39	1,430.00	55,770	55,770	55,770				
ILLUMINATION (FREEWAY) SWITCHING, CONDUIT, AND WIRING	EA	7500	25.00	187,500	187,500	187,500				
ILLUMINATION (FREEWAY) - LIGHTING POLES AND ARMS	EA	32	1,870.00	59,840	59,840	59,840				
TRAFFIC SIGNAL MODIFICATION, _____	EA	2	25,000.00	50,000	50,000	50,000				
INTERCONNECT SYSTEM (LOCAL STREETS) - LENGTH OF CONDUIT	FT	1600	28.00	44,800	44,800	44,800				
INTERCONNECT SYSTEM (FREEWAY) (SEE TAB 900 FOR DETAILS)	FT	5300	40.00	212,000	212,000	212,000				
<b>OTHER</b>										
LIGHT RAIL - REMOVAL OF MESSENGER WIRE	LF	2675	8.00	21,400	21,400					
LIGHT RAIL - INSTALLATION OF MESSENGER WIRE	LF	2675	12.00	32,100	32,100					
LIGHT RAIL - REMOVAL OF CONTACT WIRE	LF	2675	8.00	21,400	21,400					
LIGHT RAIL - INSTALLATION OF CONTACT WIRE	LF	2675	20.00	53,500	53,500					
LIGHT RAIL - BENT 6/7 CAP OCS CROSSBEAM (EAST SIDE) & ANCHORS	LS	1	58,447.46	58,447	58,447					
LIGHT RAIL - TEMPORARY PORTAL STRUCTURE & FOUNDATIONS	LS	1	50,000.00	50,000	50,000					
LIGHT RAIL - FURNISH & INSTALL OCS ASSEMBLIES + SUPPORTS	LS	1	100,000.00	100,000	100,000					
LIGHT RAIL - OCS POLE RELOCATIONS - (WEST SIDE)	EA	2	25,000.00	50,000	50,000					
LIGHT RAIL - DEMO & REPLACE IN-SPAN OCS ASSEMBLIES (HANGERS)	LS	1	100,000.00	100,000	100,000					
LIGHT RAIL - LR TRANSIT CENTER SITE RESTORATION	LS	1	100,000.00	100,000	100,000	100,000				
<b>1000 - RIGHT OF WAY DEVELOPMENT AND CONTROL</b>										
STORMWATER INFILTRATION PLANTER	LS	1	115,401.74	115,402	115,402	115,402				
WEED CONTROL	ACRE	1	2,500.00	2,500	2,500	2,500				



Description	Unit	Qty	Unit Cost	Total Cost	Likely Subcontracted	Likely DBE	Potential DBE	DBE MCMGC	MCMGC Self-Perform	MCMGC 2nd Tier DBE
PERMANENT SEEDING	ACRE	1	4,000.00	4,000	4,000	4,000				
LANDSCAPING & TREES	LS	1	1,000,000.00	1,000,000	1,000,000	1,000,000				
ARCHITECTURAL TREATMENT	LS	1	999,092.00	999,092	999,092			499,546	399,637	
CHAIN LINK FENCE	FOOT	569	28.00	15,932	15,932	15,932				
REMOVING AND REBUILDING FENCE	FOOT	100	36.00	3,600	3,600	3,600				
<b>1300- Indirect Costs</b>										
General Conditions	LS	1	40,750,313.38	40,750,313	6,520,050					
Fee	LS	1	21,003,145	21,003,145						
Permits, Bonds, and Insurance	LS	1	12,760,371	12,760,371						
				189,300,355	74,267,829	31,189,747	7,136,866	14,877,391	4,570,036	3,505,251
					39%	16.5%	3.8%		2.4%	1.9%
					Total					25%

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
<b>Package A</b>																
<b>200 - Temp Features and Appurtenances</b>																
MOBILIZATION	LS	1	7,101,435.39	7,101,435	2,485,502	745,651	9,191	1,739,852	24,505	4,901	2,941	2,450	5,881	4,166	4,166	
TRAINING	HOURL	20000														
TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	2,504,924.94	2,504,925	876,724	263,017	3,242	613,707	8,644				6,915	1,729		
TEMPORARY ILLUMINATION (FREEWAY)	LS	1	250,000.00	250,000	87,500	26,250	324	61,250	863							863
EROSION CONTROL	LS	1	510,120.64	510,121	178,542	53,563	660	124,980	1,760				1,408	176	176	
HAZMAT PLAN	LS	1	25,000.00	25,000	8,750	8,750	108									
CONTAMINATED SOIL MANAGEMENT	CUYD	7340	97.33	714,402	250,041	75,012	925	175,029	2,465					493	1,972	
<b>300 - Roadwork</b>																
CONSTRUCTION SURVEY WORK	LS	1	995,194.54	995,195	348,318	104,495	1,288	243,823	3,434				687	2,747		
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	481,894.84	481,895	168,663	50,599	624	118,064	1,663				333	831	499	
CLEARING AND GRUBBING	ACRE	0.50	129,324.42	64,662	22,632	6,790	84	15,842	223					45	179	
GENERAL EXCAVATION	CUYD	2344	35.96	84,279	29,498	8,849	109	20,648	291					58	233	
<b>400 - Drainage and Sewers</b>																
12 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	705	416.97	293,964	102,887	30,866	380	72,021	1,014				710	203	101	
15 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	223	412.75	92,043	32,215	9,665	119	22,551	318				222	64	32	
CONCRETE STORM SEWER MANHOLES	EA	5	50,307.49	251,537	88,038	26,411	326	61,627	868				608	174	87	
CONCRETE MANHOLES, STORM SEWER POLLUTION CONTROL	EA	2	67,253.93	134,508	47,078	14,123	174	32,954	464	371			93			
CONCRETE INLETS, TYPE D	EA	1	8,186.43	8,186	2,865	860	11	2,006	28	23			6			
CONCRETE INLETS, TYPE BEEHIVE OVERFLOW	EA	4	6,989.31	27,957	9,785	2,936	36	6,850	96	77			19			
CONNECTION TO EXISTING STRUCTURES	EA	5	7,142.72	35,714	12,500	3,750	46	8,750	123	99			25			
<b>510 - Bridge Nos. 16358 (NB Hwy 1 Conn to N Greeley Ave over City Streets)</b>																
CONCRETE REPAIR	SQYD	1	4,000.00	4,000	1,400	420	5	980	14		14					
STRIP SEALS	FT	30	58.46	1,754	614			614	9	9						
CLEAN AND REPAIR DECK DRAINS	EA	3	1,071.46	3,214	1,125			1,125	16				16			
<b>515 - Bridge Nos. 08958E (Hwy 1 NB to Hwy 61 SB over Conn (E Fremont Intchg))</b>																
BRIDGE REMOVAL WORK	SQFT	1589	89.84	142,749	49,962	14,989	185	34,974	493				246	246		
SHORING, CRIBBING, AND COFFERDAMS	LS	1	70,592.94	70,593	24,708	7,412	91	17,295	244				171	73		
STRUCTURE EXCAVATION	CUYD	331	47.35	15,673	5,486	1,646	20	3,840	54					54		
Granular Structural Backfill	CUYD	32	226.78	7,257	2,540											
FURNISH MICROPILE EQUIPMENT	LS	1	100,000.00	100,000	35,000	10,500	129	24,500	345				173	173		
MICROPILES	EACH	36	10,567.45	380,428	133,150	39,945	492	93,205	1,313				656	656		
MICROPILE VERIFICATION LOAD TEST	EACH	1	25,000.00	25,000	8,750	2,625	32	6,125	86				43	43		
MICROPILE PROOF LOAD TEST	EACH	4	5,000.00	20,000	7,000	2,100	26	4,900	69				35	35		
REINFORCEMENT, GRADE 60	LB	345641	1.40	484,348	169,522	50,857	627	118,665	1,671			1,504		167		
CONCRETE AND CRACK SEALER	SQFT	13230	5.15	68,150	23,852			23,852	336	235	34		50	17		
FOUNDATION CONCRETE, CLASS 3300	CUYD	80	653.50	52,280	18,298			18,298	258	180	26		39	13		
DECK CONCRETE, CLASS HPC4500	CUYD	213	2,489.17	530,193	185,568			185,568	2,614	1,830	261		392	131		
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	484	2,844.82	1,376,895	481,913			481,913	6,788	4,751	679		1,018	339		
SAW CUT TEXTURING	SQYD	628	7.80	4,896	1,714	514	6	1,200	17				17			
CONCRETE REPAIR	SQYD	30	4,000.00	120,000	42,000			42,000	592		592					
BRIDGE DRAINS	EACH	3	14,033.51	42,101	14,735			14,735	208	166			42			
BEARING DEVICES,	EACH	2	2,805.90	5,612	1,964			1,964	28	28						
2 INCH ELECTRICAL CONDUIT	FOOT	1420	25.00	35,500	12,425	3,728	46	8,698	123							123
MODULAR BRIDGE JOINT SYSTEMS	FOOT	36	670.55	24,140	8,449			8,449	119	119						
GLAND REPLACEMENT FOR MODULAR BRIDGE JOINT SYSTEMS	FOOT	110	201.83	22,202	7,771			7,771	109	109						
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	710	218.28	154,976	54,242			54,242	764	535	76		115	38		
CLEAN AND REPAIR DECK DRAINS	EACH	5	649.51	3,248	1,137			1,137	16				16			
BIRD DETERRENT DEVICES	LS	1	5,000.00	5,000	1,750			1,750	25	25						
Construction Access and Restoration	LS	1	48,127.06	48,127	16,844											
<b>520 - Bridge Nos. N8958A (Fremont Viaduct, Hwy 1 NB)</b>																
BRIDGE REMOVAL WORK	SQFT	2796	83.34	233,030	81,560	24,468	302	57,092	804				402	402		
SHORING, CRIBBING, AND COFFERDAMS	LS	1	223,411.85	223,412	78,194			78,194	1,101				771	330		
STRUCTURE EXCAVATION	CUYD	729	40.62	29,609	10,363	3,109	38	7,254	102					102		
GRANULAR WALL BACKFILL	CUYD	5	160.63	803	281	84	1	197	3				2	1		
GRANULAR STRUCTURE BACKFILL	CUYD	65	98.31	6,390	2,237			2,237	32				19	13		
FURNISH MICROPILE EQUIPMENT	LS	1	220,000.00	220,000	77,000	23,100	285	53,900	759				380	380		
MICROPILES	EACH	67	10,637.01	712,680	249,438	74,831	922	174,607	2,459				1,230	1,230		
MICROPILE VERIFICATION LOAD TEST	EACH	1	25,000.00	25,000	8,750	2,625	32	6,125	86				43	43		
MICROPILE PROOF LOAD TEST	EACH	15	5,000.00	75,000	26,250	7,875	97	18,375	259				129	129		
REINFORCEMENT, GRADE 60	LB	290445	1.71	495,594	173,458	52,037	641	121,421	1,710			1,539		171		
FOUNDATION CONCRETE, CLASS 3300	CUYD	120	967.49	116,099	40,635			40,635	572	401	57		86	29		
DECK CONCRETE, CLASS HPC4500	CUYD	320	3,127.50	1,000,800	350,280			350,280	4,934	3,453	493		740	247		
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	270	2,360.18	637,250	223,037			223,037	3,141	2,199	314		471	157		

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
SAW CUT TEXTURING	SQYD	1287	8.17	10,509	3,678	1,103	14	2,575	36							
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	41	459.49	18,839	6,594			6,594	93		74					
MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	FOOT	996	563.87	561,617	196,566			196,566	2,769		1,938					
BI51 PRECAST PRESTRESSED GIRDERS	FOOT	162	419.87	68,019	23,807			23,807	335		235					
STEEL PLATE GIRDER	LS	134000	4.15	555,542	194,440			194,440	2,739		1,917					
BRIDGE DRAINS	EACH	6	14,033.39	84,200	29,470			29,470	415		291					
BEARING DEVICES	EACH	48	2,805.90	134,683	47,139			47,139	664		465					
2 INCH ELECTRICAL CONDUIT	FOOT	1840	25.00	46,000	16,100	4,830	60	11,270	159							159
POURED JOINT SEALS	LS	259	30.00	7,770	2,720			2,720	38		27					
TYPE "F" CONCRETE RAIL, 42 INCH	LS	920	212.25	195,267	68,343			68,343	963		674	289				
CLEAN AND REPAIR DECK DRAINS	EA	12	591.17	7,094	2,483			2,483	35		24					
BENT 18 CROSSBEAM STRENGTHENING	LS	1	34,751.57	34,752	12,163			12,163	171		120					
CONCRETE SLOPE PAVING	SQFT	1063	23.33	24,796	8,679			8,679	122		86					
Surface Preparation	LS	1	5,000.00	5,000	1,750											
Coating Application	LS	1	5,000.00	5,000	1,750											
Coating Materials	LS	1	5,000.00	5,000	1,750											
Construction Access and Restoration	LS	1	219,860.21	219,860	76,951											
<b>598 - Retaining Walls &amp; Sound Walls</b>																
RETAINING WALL, WALL 1 (CANTILEVER SOLDIER PILE)	SF	2488	218.40	543,384	190,184	57,055	703	133,129	1,875	1,313					375	188
RETAINING WALL, WALL 1 (LIGHTWEIGHT FILL)	CUYD	1734	192.84	334,392	117,037	35,111	433	81,926	1,154	808					231	115
RETAINING WALL, WALL 2a (CANTILEVER SOLDIER PILE)	SF	5361	266.50	1,428,705	500,047	150,014	1,849	350,033	4,930	3,451					986	493
SOUND WALL, WALL 24	SF	5904	75.00	442,800	154,980	46,494	573	108,486	1,528	1,070					306	153
				0.00												
<b>600 - BASES</b>																
COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	SQYD	352	18.53	6,523	2,283	685	8	1,598	23						5	18
AGGREGATE BASE	TON	522	109.25	57,029	19,960	5,988	74	13,972	197						39	157
				0.00												
<b>700 - WEARING SURFACES</b>																
EMULSIFIED ASPHALT FOR TACK COAT	TON	1	650.00	650	228	68	1	159	2						0	2
LEVEL 3, 1/2 INCH ACP	TON	192	161.04	30,920	10,822	3,247	40	7,575	107						21	85
LEVEL 4, 1/2 INCH ACP	TON	233	156.46	36,455	12,759	3,828	47	8,931	126						25	101
PG 64-22 ASPHALT IN ACP	TON	11	600.00	6,600	2,310	693	9	1,617	23						5	18
PG 70-22ER ASPHALT IN ACP	TON	14	555.00	7,770	2,720	816	10	1,904	27						5	21
CONCRETE CURBS, CURB AND GUTTER	FOOT	12	240.59	2,887	1,010	303	4	707	10	7	3					
CONCRETE CURBS, STANDARD CURB	FOOT	501	49.08	24,587	8,605	2,582	32	6,024	85	59	25					
CONCRETE WALKS	SQFT	4198	14.37	60,329	21,115	6,335	78	14,781	208	146	62					
EXTRA FOR NEW CURB RAMPS	EA	1	3,855.05	3,855	1,349	405	5	944	13	9	4					
TRUNCATED DOMES ON NEW SURFACES	SQFT	12	36.00	432	151	45	1	106	1	1	0					
				0.00												
<b>800 - PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES</b>																
IMPACT ATTENUATOR, TYPE L	EA	2	40,000.00	80,000.00	28,000	8,400	104	19,600	276						138	138
LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	340	1.50	510.00	179	54	1	125	2						1	1
PAVEMENT BAR: TYPE AB	SQFT	200	12.00	2,400.00	840	252	3	588	8						4	4
				0.00												
<b>900 - PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS</b>																
SIGNING (MINOR FREEWAY, SEE TAB 900 FOR DETAILS)	LS	1	25,000.00	25,000	8,750	2,625	32	6,125	86						43	43
REMOVAL OF EXISTING OVERHEAD SIGN STRUCTURE	EA	4	30,000.00	120,000	42,000	12,600	155	29,400	414						207	207
TRUSS SIGN BRIDGE	EA	2	223,000.00	446,000	156,100	46,830	577	109,270	1,539						770	770
MONOTUBE CANTILEVER SIGN STRUCTURES	EA	1	125,000.00	125,000	43,750	13,125	162	30,625	431						216	216
BRIDGE STRUCTURE MOUNTS	EA	3	45,000.00	135,000	47,250	14,175	175	33,075	466						233	233
SIGNING (OVERHEAD, SEE TAB 900 FOR DETAILS)	SQFT	4950	34.00	168,300	58,905	17,672	218	41,234	581						290	290
ILLUMINATION (LOCAL STREETS) - DECORATIVE LUMINAIRES: LAMPS, BALLASTS, POLES AND ARMS	EA	3	4,400.00	13,200	4,620	1,386	17	3,234	46							46
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT, FOUNDATIONS	EA	3	1,650.00	4,950	1,733	520	6	1,213	17							17
ILLUMINATION (FREEWAY) - POLE FOUNDATIONS	EA	13	1,650.00	21,450	7,508	2,252	28	5,255	74							74
ILLUMINATION (FREEWAY) - LUMINAIRES, LAMPS, AND BALLASTS	EA	13	1,430.00	18,590	6,507	1,952	24	4,555	64							64
ILLUMINATION (FREEWAY) - SWITCHING, CONDUIT, AND WIRING	FT	3000	30.00	90,000	31,500	9,450	116	22,050	311							311
ILLUMINATION (FREEWAY) - LIGHTING POLES AND ARMS	EA	13	1,870.00	24,310	8,509	2,553	31	5,956	84							84
INTERCONNECT SYSTEM (FREEWAY) (SEE TAB 900 FOR DETAILS)	FT	6200	40.00	248,000	86,800	26,040	321	60,760	856							856
				0.00												
<b>1000 - RIGHT OF WAY DEVELOPMENT AND CONTROL</b>																
WATER QUALITY STRUCTURE	LS	1	64,954.82	64,955	22,734	6,820	84	15,914	224	134	45					45
WATER QUALITY SWALE	LS	1	39,879.57	39,880	13,958	4,187	52	9,770	138	83	28					28
WATER QUALITY PLANTERS	LS	1	54,052.26	54,052	18,918	5,675	70	13,243	187	112	37					37
WEED CONTROL	ACRE	0.5	1.00	1	0	0	0	0	0							0
PERMANENT SEEDING	ACRE	0.5	4,000.00	2,000	700	210	3	490	7							7
ARCHITECTURAL TREATMENT	LS	1	433,610.00	433,610	151,764	45,529	561	106,234	1,496	1,197						299
CHAIN LINK FENCE WITH	FOOT	158	30.00	4,740	1,659	498	6	1,161	16							16
<b>Package B</b>																
<b>200 - Temp Features and Appurtenances</b>																
MOBILIZATION	LS	1	17,171,624.86	17,171,625	6,010,069	1,803,021	22,224	4,207,048	59,254	11,851	7,111	5,925	14,221	10,073	10,073	
TRAINING	HOURLY	100000														
TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	10,019,699.78	10,019,700	3,506,895	1,052,068	12,968	2,454,826	34,575						27,660	6,915
RAILROAD FLAGGER SERVICES	EACH	1	507,000.00	507,000	177,450	53,235	656	124,215	1,750						1,750	
TEMPORARY ILLUMINATION (LOCAL STREETS)	LS	1	15,000.00	15,000	5,250	1,575	19	3,675	52							52

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
TEMPORARY ILLUMINATION (FREEWAY)	LS	1	250,000.00	250,000	87,500	26,250	324	61,250	863							863
TEMPORARY TRAFFIC SIGNAL	EA	1	54,999.99	55,000	19,250	5,775	71	13,475	190							190
EROSION CONTROL	LS	1	3,217,283.06	3,217,283	1,126,049	337,815	4,164	788,234	11,102				8,882	1,110	1,110	
HAZMAT PLAN	LS	1	25,000.00	25,000	8,750	2,625	32	6,125	86							
CONTAMINATED SOIL MANAGEMENT	CUYD	29260	97.07	2,840,268	994,094	298,228	3,676	695,866	9,801					1,960	7,841	
<b>300 - Roadwork</b>																
CONSTRUCTION SURVEY WORK	LS	1	2,098,611.19	2,098,611	734,514	220,354	2,716	514,160	7,242					1,448	5,793	
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	825,045.33	825,045	288,766	86,630	1,068	202,136	2,847				569	1,423	854	
CLEARING AND GRUBBING	ACRE	2	45,048.63	90,097	31,534	9,460	117	22,074	311					62	249	
GENERAL EXCAVATION	CUYD	11230	59.32	666,175	233,161	69,948	862	163,213	2,299					460	1,839	
12 INCH SUBGRADE STABILIZATION	SQYD	7190	28.62	205,778	72,022	21,607	266	50,416	710					497	213	
SUBGRADE GEOTEXTILE	SQYD	9585	4.52	43,324	15,163	4,549	56	10,614	149					105	45	
<b>400 - Drainage and Sewers</b>																
12 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	829	431.91	358,052	125,318	37,595	463	87,723	1,236					865	247	124
18 INCH STORM SEWER PIPE, 10 FT DEPTH	LF	400	408.14	163,256	57,140	17,142	211	39,998	563					394	113	56
CONCRETE STORM SEWER MANHOLES	EA	3	51,518.29	154,555	54,094	16,228	200	37,866	533					53		
CONCRETE INLETS, TYPE CG-2	EA	3	7,779.94	23,340	8,169	2,451	30	5,718	81	40	16			24		
CONCRETE INLETS, TYPE CG-3	EA	1	8,524.92	8,525	2,984	895	11	2,089	29	15	6			9		
CONCRETE INLETS, TYPE G-2	EA	7	7,709.95	53,970	18,889	5,667	70	13,223	186	93	37			56		
CONCRETE INLETS, TYPE BEEHIVE OVERFLOW INLET	EA	2	7,263.82	14,528	5,085	1,525	19	3,559	50	25	10			15		
ADJUSTING INLETS	EA	4	923.45	3,694	1,293	388	5	905	13	6	3			4		
CONNECTION TO EXISTING STRUCTURES	EA	7	7,142.72	49,999	17,500	5,250	65	12,250	173	86	35			52		
<b>570 - Bridge Nos. 08583 (Hwy 1 over NE Hassalo St &amp; NE Holladay St)</b>																
BRIDGE REMOVAL WORK	SQFT	2488	93.69	233,095	81,583	24,475	302	57,108	804					402	402	
CLASS 2 PREPARATION	SQYD	2390	140.82	336,587	117,805	35,342	436	82,464	1,161		1,161					
Shoring, Cribbing, and Cofferdams	LS	1	136,000.00	136,000												
STRUCTURE EXCAVATION	CUYD	212	46.47	9,851	3,448	1,034	13	2,414	34					20	14	
GRANULAR STRUCTURE BACKFILL	CUYD	500	67.04	33,520	11,732	3,520	43	8,212	116					69	46	
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	105,000	31,500	388	73,500	1,035					621	414	
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	456	825.27	376,322	131,713	39,514	487	92,199	1,299					779	519	
PERMANENT SHAFT CASINGS, 60 INCH DIAMETER	FOOT	456	1,147.37	523,200	183,120	54,936	677	128,184	1,805					1,083	722	
DRILLED SHAFT CONCRETE	CUYD	332	567.64	188,237	65,883	19,765	244	46,118	650					390	260	
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	165806	1.64	271,166	94,908	28,472	351	66,436	936			842			94	
CSL TEST ACCESS TUBES	FOOT	2520	13.45	33,905	11,867	3,560	44	8,307	117			105			12	
CSL TESTS	EACH	12	1,800.00	21,600	7,560	2,268	28	5,292	75						75	
FURNISH PILE DRIVING EQUIPMENT	LS	1	30,553.42	30,553	10,694			10,694	151	105					45	
DRIVE PP 16 X 0.5 STEEL PILES	EACH	22	3,576.75	78,689	27,541			27,541	388	272					116	
FURNISH PP 16 X 0.5 STEEL PILES	EACH	1243	136.56	169,748	59,412			59,412	837	586					251	
REINFORCEMENT, GRADE 60	LB	377748	1.52	574,434	201,052	60,316	743	140,736	1,982			1,784			198	
INJECT AND SEAL CRACKS	FOOT	1000	27.50	27,500	9,625			9,625	136	68	68					
FOUNDATION CONCRETE, CLASS 4000	CUYD	56	2,112.18	118,282	41,399			41,399	583	466				87	29	
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	318	1,766.98	561,901	196,665			196,665	2,770	2,216				415	138	
GENERAL STRUCTURAL CONCRETE, CLASS 5000	CUYD	67	4,675.80	313,278	109,647			109,647	1,544	1,235				232	77	
DECK CONCRETE, CLASS HPC4500	CUYD	659	1,987.50	1,309,764	458,417			458,417	6,457	5,165				968	323	
DECK CONCRETE, CLASS HPC4500	CUYD	299	969.40	289,621	101,367			101,367	1,428	1,142				214	71	
SAW CUT TEXTURING	SQYD	2250	7.00	15,750	5,513	1,654	20	3,859	54					54		
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	308	527.03	162,325	56,814			56,814	800	640				120	40	
MODIFIED WSDOT WF50G PRECAST PRESTRESSED GIRDERS	FOOT	480	506.61	243,171	85,110			85,110	1,199	719				240	240	
MODIFIED DECK BT 45 PRECAST PRESTRESSED GIRDERS	FOOT	2142	526.00	1,126,699	394,345			394,345	5,554	3,332				1,111	1,111	
PHASE I SEISMIC UPGRADE	EACH	1	304,450.39	304,450	106,558			106,558	1,501	900				300	300	
BRIDGE DRAINS	EACH	4	13,821.70	55,287	19,350			19,350	273	164				55	55	
BRIDGE DRAIN DEBRIS REMOVAL	EACH	3	1,259.59	3,779	1,323			1,323	19					19		
BEARING DEVICES,	EACH	84	207.93	17,466	6,113			6,113	86	69				13	4	
TYPE "D" PREFORMED COMPRESSION JOINT SEALS	FOOT	1080	76.92	83,070	29,075			29,075	410	328				61	20	
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	FOOT	154	77.81	11,983	4,194			4,194	59	47				9	3	
POURED JOINT SEAL	FOOT	497	30.00	14,910	5,219			5,219	74	59				11	4	
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	878	196.51	172,532	60,386			60,386	851	595	85			128	43	
Concrete Slope Paving	SQFT	4,324	21.50	92,985	32,545	9,763	121	22,781	321	225				48	16	
7 Foot Metal Protective Fence	FOOT	878	350.00	307,300	107,555	32,267	398	75,289	1,060					159	53	
Removing and Rebuilding Fence	FOOT	26	350.00	9,100	3,185	956	12	2,230	31					5	2	
Construction Access and Restoration	LS	1	253,182.27	253,182	88,614	26,584	328	62,030	874					131	44	
<b>575 - Bridge No. 08588C (Hwy 1 SB to Hwy 2 EB over Hwy 1 and Conn (Banfield Intchg))</b>																
BRIDGE REMOVAL WORK	SQFT	909	71.37	64,879	22,708	6,812	84	15,895	224					112	112	
Shoring, Cribbing and Cofferdams	LS	1	182,822.57	182,823	63,988	19,196	237	15,895	224	134				90		
Structure Excavation	CUYD	436	57.27	24,968	8,739			8,739	123					62	62	
Granular Structure Backfill	CUYD	345	59.26	20,443	7,155			7,155	101					50	50	
DRILLED SHAFT CONCRETE	CUYD	25	583.33	14,583	5,104	1,531	19	3,573	50					25	25	
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	12726	1.66	21,178	7,412	2,224	27	5,189	73			66			7	
CSL TEST ACCESS TUBES	FOOT	195	14.23	2,775	971	291	4	680	10			9			1	
CSL TESTS	EACH	1	1,800.00	1,800	630	189	2	441	6			6			1	
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	35	737.81	25,823	9,038	2,711	33	6,327	89					53	36	
FURNISH MICROPILE EQUIPMENT	LS	1	100,000.00	100,000	35,000	10,500	129	24,500	345					173	173	

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
MICROPILES	EACH	32	10,265.54	328,497	114,974	34,492	425	80,482	1,134				567	567		
MICROPILE VERIFICATION LOAD TEST	EACH	2	25,000.00	50,000	17,500	5,250	65	12,250	173				86	86		
MICROPILE PROOF LOAD TEST	EACH	2	5,000.00	10,000	3,500	1,050	13	2,450	35				17	17		
FURNISH MICROPILE CASING	FOOT	540	45.00	24,300	8,505	2,552	31	5,954	84				42	42		
REINFORCEMENT, GRADE 60	LB	88192	1.72	151,643	53,075	15,922	196	37,152	523			471				
FOUNDATION CONCRETE, CLASS 4000	CUYD	102	691.41	70,524	24,683			24,683	348	278			52	17		
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	70	2,991.34	209,393	73,288			73,288	1,032	826			155	52		
DECK CONCRETE, CLASS HPC4500	CUYD	79	2,741.82	216,604	75,811			75,811	1,068	854			160	53		
SAW CUT TEXTURING	SQYD	272	8.84	2,404	841	252	3	589	8	7			1	0		
FURNISH MPCO MATERIAL	SQYD	40	20.00	800	280			280	4	2	1		1			
CONSTRUCT MPCO	SQYD	40	20.00	800	280			280	4	2	1		1			
STRUCTURAL CONCRETE OVERLAY MATERIAL	CUYD	5	194.25	971	340			340	5	2	1		1			
CONSTRUCT STRUCTURAL CONCRETE OVERLAY	SQYD	60	352.19	21,132	7,396			7,396	104	52	31		21			
STEEL PLATE GIRDER	LB	107558	4.26	458,126	160,344			160,344	2,258			1,807	339	113		
STEEL COLUMN JACKET	EACH	2	27,983.23	55,966	19,588			19,588	276			221	41	14		
CFRP STRENGTHENING - NEAR SURFACE MOUNTED	FOOT	360	25.00	9,000	3,150			3,150	44	35			9			
BRIDGE DRAINS	EACH	1	14,033.28	14,033	4,912			4,912	69	55			14			
BEARING DEVICES, BENT	EACH	8	4,037.31	32,299	11,304			11,304	159	127			32			
STRIP SEALS	FOOT	28	576.76	16,149	5,652			5,652	80	64			12	4		
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	272	228.33	62,106	21,737			21,737	306	214	31		46	15		
SURFACE PREPARATION	LS	1	5,000.00	5,000	1,750			1,750	25			20	5			
COATING APPLICATION	LS	1	5,000.00	5,000	1,750	525	6	1,225	17		14		3			
COATING MATERIALS	LS	1	5,000.00	5,000	1,750	525	6	1,225	17		14		3			
10 FT TYPE "D" PROTECTIVE FENCE	FOOT	60	400.00	24,000	8,400	2,520	31	5,880	83				66	17		
OTHER RAILROAD COSTS	LS	1	12,955.85	12,956	4,535											
Construction Access and Restoration	LS	1	47,764.70	47,765	16,718	5,015	62	33,435	471	283			188			
<b>580 - Bridge No. N8588E (Hwy 1 NB over UPRR)</b>																
TYPE "F" CONCRETE RAIL, RETROFIT	FOOT	1212	223.13	270,434	94,652			94,652	1,333	933	133		200	67		
<b>585 - Bridge No. S8588E (Hwy 1 SB over UPRR)</b>																
BRIDGE REMOVAL WORK	SQFT	2407	93.84	225,862	79,052	23,716	292	55,336	779				390	390		
Shoring, Cribbing, and Cofferdams	LS	1	308,127.98	308,128	107,845	32,353	399	75,491	1,063	638			255			
STRUCTURE EXCAVATION	CUYD	762	33.79	25,749	9,012	2,704	33	6,309	89				53	36		
GRANULAR STRUCTURE BACKFILL	CUYD	257	65.53	16,842	5,895	1,768	22	4,126	58				35	23		
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	105,000	31,500	388	73,500	1,035				621	414		
DRILLED SHAFT CONCRETE	CUYD	114	575.24	65,577	22,952	6,886	85	16,066	226				136	91		
DRILLED SHAFT REINFORCEMENT, GRADE 60	LB	56752	1.57	88,951	31,133	9,340	115	21,793	307			276		31		
CSL TEST ACCESS TUBES	FOOT	786	12.51	9,831	3,441	1,032	13	2,408	34			31		3		
CSL TESTS	EACH	4	1,800.00	7,200	2,520	756	9	1,764	25				25			
DRILLED SHAFT EXCAVATION, 60 INCH DIAMETER	FOOT	110	737.92	81,171	28,410	8,523	105	19,887	280				168	112		
DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	FOOT	18	1,098.04	19,765	6,918	2,075	26	4,842	68				41	27		
FURNISH MICROPILE EQUIPMENT	LS	1	140,000.00	140,000	49,000	14,700	181	34,300	483				242	242		
MICROPILES	EACH	42	10,419.51	437,620	153,167	45,950	566	107,217	1,510				755	755		
MICROPILE VERIFICATION LOAD TEST	EACH	3	25,000.00	75,000	26,250	7,875	97	18,375	259				129	129		
MICROPILE PROOF LOAD TEST	EACH	3	5,000.00	15,000	5,250	1,575	19	3,675	52				26	26		
FURNISH MICROPILE CASING	FOOT	630	45.00	28,350	9,923	2,977	37	6,946	98				49	49		
FURNISH PILE DRIVING EQUIPMENT	LS	1	10,515.74	10,516	3,681	1,104	14	2,576	36				18	18		
FURNISH PP 16 X 0.5 STEEL PILES	FOOT	250	149.26	37,315	13,060	3,918	48	9,142	129	90				39		
DRIVE PP 16 X 0.5 STEEL PILES	EACH	5	3,795.24	18,976	6,642	1,992	25	4,649	65	46				20		
REINFORCEMENT, GRADE 60	LB	390811	1.64	642,571	224,900	67,470	832	157,430	2,217			1,996		222		
FOUNDATION CONCRETE, CLASS 4000	CUYD	239	514.65	123,001	43,050			43,050	606	485			91	30		
DECK CONCRETE, CLASS HPC4500	CUYD	486	1,931.61	938,764	328,567			328,567	4,628	3,702			694	231		
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	334	1,465.07	489,333	171,266			171,266	2,412	1,930			362	121		
SAW CUT TEXTURING	SQYD	1750	21.13	36,970	12,939	3,882	48	9,058	128				128			
CONCRETE REPAIR	SQYD	404	4,000.00	1,616,000	565,600			565,600	7,966		7,966					
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	84	386.27	32,447	11,356			11,356	160	128			24	8		
21 INCH PRECAST PRESTRESSED SLABS	FOOT	270	567.19	153,142	53,600			53,600	755	453			151	151		
FURNISH MPCO MATERIAL	SQYD	453	20.00	9,060	3,171			3,171	45			45				
CONSTRUCT MPCO	SQYD	453	20.00	9,060	3,171			3,171	45	13	31					
STRUCTURAL CONCRETE OVERLAY MATERIAL	CUYD	48	194.25	9,324	3,263			3,263	46	14	32					
CONSTRUCT STRUCTURAL CONCRETE OVERLAY	SQYD	570	215.93	123,080	43,078			43,078	607	182	425					
STEEL PLATE GIRDER	LB	664431	3.92	2,604,048	911,417			911,417	12,837			10,269	1,926	642		
STEEL COLUMN JACKET	EACH	1	32,117.00	32,117	11,241			11,241	158	111				47		
CFRP STRENGTHENING - NEAR SURFACE MOUNTED	SQFT	4074	15.27	62,226	21,779	6,534	81	15,245	215	150				64		
BRIDGE DRAINS	EACH	2	14,033.63	28,067	9,824			9,824	138	111			21	7		
CLEAN EXISTING BRIDGE DRAINS	EACH	15	582.84	8,743	3,060			3,060	43				43			
RECONNECT DRAIN PIPES	EACH	4	1,679.01	6,716	2,351			2,351	33				33			
BEARING DEVICES, BENT	EACH	36	3,101.71	111,662	39,082			39,082	550	440			83	28		
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	FOOT	204	149.45	30,488	10,671			10,671	150	120			23	8		
STRIP SEALS	FOOT	132	416.66	55,000	19,250			19,250	271	217			41	14		
TYPE "F" CONCRETE RAIL, 42 INCH	FOOT	1269	217.99	276,627	96,819			96,819	1,364	955	136		205	68		
CONCRETE BARRIER, TALL	FOOT	267	125.50	33,508	11,728			11,728	165	116	17		25	8		
SURFACE PREPARATION	LS	1	5,000.00	5,000	1,750	525	6	1,225	17		14		3			

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
COATING APPLICATION	LS	1	5,000.00	5,000	1,750	525	6	1,225	17		14		3			
COATING MATERIALS	LS	1	5,000.00	5,000	1,750	525	6	1,225	17		14		3			
10 Ft Type "D" Protective Fence	FOOT	109	396.33	43,200	15,120	4,536	56	10,584	149				75	75		
Foundation Concrete, Class 3300	CUYD	14	1,982.66	27,757	9,715	2,915	36	6,801	96	67			29			
Construction Access and Restoration	LS	1	69,208.76	69,209	24,223	7,267	90	16,956	239				119	119		
<b>596 - Bridge No. 08588A (Hwy 2 WB to Hwy 1 NB over UPRR (Banfield Intchg))</b>																
BRIDGE REMOVAL WORK	SOFT	2291	43.00	98,515	34,480	10,344	128	24,136	340				170	170		
SHORING, CRIBBING, AND COFFERDAMS	LS	1	196,520.00	196,520	68,782			68,782	969				678	291		
STRUCTURE EXCAVATION	CUYD	340	77.84	26,466	9,263	2,779	34	6,484	91				55	37		
GRANULAR STRUCTURE BACKFILL	CUYD	106	72.65	7,701	2,695	809	10	1,887	27				16	11		
FURNISH DRILLING EQUIPMENT	LS	1	300,000.00	300,000	105,000	31,500	388	73,500	1,035				621	414		
DRILLED SHAFT CONCRETE	LS	193	564.65	108,977	38,142	11,443	141	26,699	376				226	150		
DRILLED SHAFT REINFORCEMENT, GRADE 60	LS	96633	1.52	147,272	51,545	15,464	191	36,082	508			457		51		
CSL TEST ACCESS TUBES	FOOT	1206	12.61	15,203	5,321	1,596	20	3,725	52			47		5		
CSL TESTS	EACH	6	1,800.00	10,800	3,780	1,134	14	2,646	37					37		
DRILLED SHAFT EXCAVATION, 72 INCH DIAMETER	FOOT	149	854.64	127,341	44,569	13,371	165	31,199	439				264	176		
DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	FOOT	20	1,096.25	21,925	7,674	2,302	28	5,372	76				45	30		
FURNISH MICROPILE EQUIPMENT	LS	1	140,000.00	140,000	49,000	14,700	181	34,300	483				242	242		
MICROPILES	EACH	28	10,425.89	291,925	102,174	30,652	378	71,522	1,007				504	504		
MICROPILE VERIFICATION LOAD TEST	EACH	2	25,000.00	50,000	17,500	5,250	65	12,250	173				86	86		
MICROPILE PROOF LOAD TEST	EACH	2	10,000.00	20,000	7,000	2,100	26	4,900	69				35	35		
FURNISH PILE DRIVING EQUIPMENT	LS	1	10,428.08	10,428	3,650			3,650	51	26			10	15		
FURNISH PP 16 X 0.5 STEEL PILES	FOOT	270	138.20	37,315	13,060			13,060	184	92			37	55		
DRIVE PP 16 X 0.5 STEEL PILES	EACH	5	3,767.84	18,839	6,594			6,594	93	46			19	28		
REINFORCEMENT, GRADE 60	LB	241061	1.70	410,723	143,753	43,126	532	100,627	1,417			1,276		142		
FOUNDATION CONCRETE, CLASS 3300	CUYD	105	561.22	58,928	20,625			20,625	290	232			44	15		
DECK CONCRETE, CLASS HPC4500	CUYD	334	2,468.54	824,492	288,572			288,572	4,064	3,252			610	203		
GENERAL STRUCTURAL CONCRETE, CLASS 3300	CUYD	15	1,564.52	23,468	8,214			8,214	116	93			17	6		
GENERAL STRUCTURAL CONCRETE, CLASS 4000	CUYD	195	2,271.35	442,913	155,020			155,020	2,183	1,747			328	109		
REINFORCED CONCRETE BRIDGE END PANELS	SQYD	55	517.01	28,435	9,952			9,952	140	112			21	7		
21 INCH PRECAST PRESTRESSED SLABS	FOOT	225	590.76	132,920	46,522			46,522	655	393			131	131		
STEEL PLATE GIRDER	LS	474600	4	1,983,828	694,340			694,340	9,779			5,868	1,956	1,956		
STEEL COLUMN JACKET	EACH	1	14,996.19	14,996	5,249			5,249	74	44			15	15		
BRIDGE DRAINS	EACH	5	14,033.56	70,168	24,559			24,559	346	277			52	17		
CLEAN EXISTING BRIDGE DRAINS	EACH	8	612.00	4,896	1,714			1,714	24				24			
BEARING DEVICES, BENT 2-9	EACH	49	3,974.81	194,766	68,168			68,168	960	768			144	48		
TYPE "A" PREFORMED COMPRESSION JOINT SEALS	LS	1	10,496.74	10,497	3,674			3,674	52	41			8	3		
TYPE "B" PREFORMED COMPRESSION JOINT SEALS	LS	1	11,923.38	11,923	4,173			4,173	59	47			9	3		
TYPE "C" PREFORMED COMPRESSION JOINT SEALS	LS	1	41,362.71	41,363	14,477			14,477	204	163			31	10		
TYPE "E" PREFORMED COMPRESSION JOINT SEALS	LS	1	15,184.26	15,184	5,314			5,314	75	60			11	4		
STRIP SEALS	LS	1	33,058.02	33,058	11,570			11,570	163	130			24	8		
TYPE "F" CONCRETE RAIL, RETROFIT	LS	632	213.45	134,901	47,215			47,215	665	466	67		100	33		
TYPE "F" CONCRETE RAIL, 42-INCH	LS	471	195.93	92,283	32,299			32,299	455	318	45		68	23		
SURFACE PREPARATION	LS	1	5,000.00	5,000	1,750	525	6	1,225	17	12	2		3	1		
COATING APPLICATION	LS	1	5,000.00	5,000	1,750	525	6	1,225	17	12	2		3	1		
COATING MATERIALS	LS	1	5,000.00	5,000	1,750	525	6	1,225	17	12	2		3	1		
CONCRETE SLOPE PAVING	SOFT	1030	22.75	23,435	8,202			8,202	116	81	12		17	6		
7 FOOT TYPE METAL PROTECTIVE FENCE	FOOT	45	350.00	15,750	5,513			5,513	78	54		23				
REMOVING AND REBUILDING FENCE	FOOT	57	350.00	19,950	6,983			6,983	98	69		30				
REMOVAL OF TRANSIENT ENCAMPMENTS AND SITE CLEAN-UP	LS	1	15,000.00	15,000	5,250			5,250	74				74			
Construction Access and Restoration	LS	1	93,315.76	93,316	32,661	9,798	121	22,862	322				161	161		
<b>598 - Retaining Walls &amp; Sound Walls</b>																
RETAINING WALL, WALL 7 (CANTILEVER SOLDIER PILE)	SF	2074	423	876,266	306,693	92,008	1,134	214,685	3,024	1,209	151	302	605	756		
RETAINING WALL, WALL 12a (CANTILEVER SOLDIER PILE)	SF	1190	445	529,074	185,176	55,553	685	129,623	1,826	730	91	183	365	456		
RETAINING WALL, WALL 12b (CANTILEVER SOLDIER PILE W/ TIE)	SF	5621	355	1,994,893	698,213	209,464	2,582	488,749	6,884	2,754	344	688	1,377	1,721		
42 INCH TYPE "F" TRAFFIC BARRIER COPING WITH MOMENT SLA	FOOT	120	617	74,039	25,914			25,914	365	146	18	36	73	91		
RETAINING WALL, WALL 13a (CANTILEVER SOLDIER PILE)	SF	6532	278	1,817,208	636,023	190,807	2,352	445,216	6,271	2,508	314	627	1,254	1,568		
RETAINING WALL, WALL 14 (CANTILEVER SOLDIER PILE W/ TIE-B	SF	4878	338	1,648,764	577,067	173,120	2,134	403,947	5,689	2,276	284	569	1,138	1,422		
RETAINING WALL, WALL 15 (CANTILEVER SOLDIER PILE W/ TIE-B	SF	8677	278	2,413,942	844,880	253,464	3,124	591,416	8,330	3,332	416	833	1,666	2,082		
SOUND WALL, WALL 25	SF	35360	75	2,652,000	928,200	278,460	3,432	649,740	9,151			458	6,406	2,288		
<b>600 - BASES</b>																
COLD PLANE PAVEMENT REMOVAL, 2 - 6 INCHES DEEP	SQYD	3190	11.70	37,317	13,061	3,918	48	9,143	129					52	77	
AGGREGATE BASE	TON	4514	71.84	324,286	113,500			113,500	1,599				160	480	959	
<b>700 - WEARING SURFACES</b>																
EMULSIFIED ASPHALT FOR TACK COAT	TON	3	650.00	1,950	683	205	3	478	7				1	3	2	
LEVEL 3, 1/2 INCH ACP	TON	1941	150.46	292,041	102,214	30,664	378	71,550	1,008				202	504	302	
LEVEL 4, 1/2 INCH ACP	TON	1047	163.65	171,278	59,947	17,984	222	41,963	591				118	296	177	
PG 64-22 ASPHALT IN _____ ACP	TON	116	600.00	69,600	24,360	7,308	90	17,052	240				48	120	72	
PG 70-22ER ASPHALT IN _____ ACP	TON	63	600.00	37,800	13,230	3,969	49	9,261	130				26	65	39	
PLAIN CONCRETE PAVEMENT REPAIR	SQYD	114	119.09	13,576	4,752			4,752	67		67					
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT 12 INCHES	SQYD	8484	178.68	1,515,989	530,596			530,596	7,473		1,868	1,868	1,495	2,242		
CONCRETE CURBS, STANDARD CURB	FOOT	1994	46.58	92,885	32,510	9,753	120	22,757	321	160	96		64			

Description	Unit	Qty	Unit Cost	Total Cost	Total Labor	MGT Labor	MGT Hrs	Craft Labor	Craft Hrs	Carpenter	Finisher	Ironworker	Laborer	Operator	Driver	Electrician
CONCRETE CURBS, CURB AND GUTTER	FOOT	265	60.20	15,952	5,583	1,675	21	3,908	55	28	17		11			
CONCRETE DRIVEWAYS	SQFT	498	28.51	14,200	4,970	1,491	18	3,479	49	25	15		10			
CONCRETE WALKS	SQFT	26707	15.24	407,061	142,471	42,741	527	99,730	1,405	702	421		281			
EXTRA FOR NEW CURB RAMPS	EA	15	3,355.06	50,326	17,614	5,284	65	12,330	174	87	52		35			
PATTERNED CONCRETE SURFACING	SQFT	1154	35.41	40,863	14,302	4,291	53	10,011	141	71	42		28			
TRUNCATED DOMES ON NEW SURFACES	SQFT	194	36.00	6,972	2,440	732	9	1,708	24	12	7		5			
<b>800 - PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES</b>																
CONCRETE BARRIER, TALL	FOOT	4714	110.00	518,540	181,489	54,447	671	127,042	1,789	1,253	179		268	89		
IMPACT ATTENUATOR, TYPE L	EA	2	35,000.00	70,000	24,500	7,350	91	17,150	242	169	24		36	12		
METHYL METHACRYLATE, EXTRUDED, SURFACE, PROFILED	FOOT	16789	5.00	83,945	29,381	8,814	109	20,567	290	203	29		43	14		
LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	5106	1.50	7,659	2,681	804	10	1,876	26					26		
PAVEMENT LEGEND, TYPE AB: ARROWS	EA	4	500.00	2,000	700	210	3	490	7					7		
PAVEMENT BAR: TYPE AB	SQFT	1100	12.00	13,200	4,620	1,386	17	3,234	46					46		
GREEN BICYCLE LANE, METHYL METHACRYLATE	SQFT	299	5.00	1,495	523	157	2	366	5	4	1		1	0		
RED TRANSIT LANE, METHYL METHACRYLATE	SQFT	551	5.00	2,756	965	289	4	675	10	7	1		1	0		
<b>900 - PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS</b>																
SIGNING (LOCAL STREETS, SEE TAB 900 FOR DETAILS)	LS	1	20,000.00	20,000	7,000	2,100	26	4,900	69				41	28		
SIGNING (MINOR FREEWAY, SEE TAB 900 FOR DETAILS)	LS	1	25,000.00	25,000	8,750	2,625	32	6,125	86				52	35		
REMOVAL OF EXISTING OVERHEAD SIGN STRUCTURE	EA	6	30,000.00	180,000	63,000	18,900	233	44,100	621				373	248		
TRUSS SIGN BRIDGE	EA	2	223,000.00	446,000	156,100	46,830	577	109,270	1,539				923	616		
MONOTUBE SIGN BRIDGE	EA	1	140,000.00	140,000	49,000	14,700	181									
MONOTUBE CANTILEVER SIGN STRUCTURES	EA	1	116,000.00	116,000	40,600	12,180	150	28,420	400				240	160		
BRIDGE STRUCTURE MOUNTS	EA	4	45,000.00	180,000	63,000	18,900	233	44,100	621				373	248		
VERTICAL SIGN MOUNTS ON EXISTING STRUCTURES	EA	1	30,000.00	30,000	10,500	3,150	39	7,350	104				62	41		
SIGNING (OVERHEAD, SEE TAB 900 FOR DETAILS)	SQFT	3230	34.00	109,820	38,437	11,531	142	26,906	379				227	152		
ILLUMINATION (LOCAL STREETS) - DECORATIVE LUMINAIRES: LAMPS, BALLASTS, POLES AND ARMS	EA	9	4,400.00	39,600	13,860	4,158	51	9,702	137				82	55		
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT, AND WIRING, AT-GRADE	EA	9	20.00	180	63	19		44	1							1
ILLUMINATION (LOCAL STREETS) - SWITCHING, CONDUIT, AND WIRING, IN CAP OR BRIDGE DECK	EA	66	30.00	1,980	693	208	3	485	7				1	1		4
ILLUMINATION (LOCAL STREETS) - DECORATIVE POLE FOUNDATIONS	EA	9	1,650.00	14,850	5,198	1,559	19	3,638	51				10	10		31
ILLUMINATION (LOCAL STREETS - FREEWAY UNDERDECK) - LUMINAIRES, LAMPS, AND BALLASTS	EA	66	400.00	26,400	9,240	2,772	34	6,468	91				18	18		55
ILLUMINATION (FREEWAY) POLE FOUNDATIONS	EA	32	1,650.00	52,800	18,480	5,544	68	12,936	182							182
ILLUMINATION (FREEWAY) LUMIN, LAMPS, AND BALLASTS	EA	39	1,430.00	55,770	19,520	5,856	72	13,664	192							192
ILLUMINATION (FREEWAY) SWITCHING, CONDUIT, AND WIRING	EA	7500	25.00	187,500	65,625	19,688	243	45,938	647							647
ILLUMINATION (FREEWAY) - LIGHTING POLES AND ARMS	EA	32	1,870.00	59,840	20,944	6,283	77	14,661	206							206
TRAFFIC SIGNAL MODIFICATION	EA	2	25,000.00	50,000	17,500	5,250	65	12,250	173				35	35		104
INTERCONNECT SYSTEM (LOCAL STREETS) - LENGTH OF CONDUIT	FT	1600	28.00	44,800	15,680	4,704	58	10,976	155				31	31		93
INTERCONNECT SYSTEM (FREEWAY) (SEE TAB 900 FOR DETAILS)	FT	5300	40.00	212,000	74,200	22,260	274	51,940	732				146	146		439
<b>OTHER</b>																
LIGHT RAIL - REMOVAL OF MESSENGER WIRE	LF	2675	8.00	21,400	7,490	2,247	28	5,243	74				22	52		
LIGHT RAIL - INSTALLATION OF MESSENGER WIRE	LF	2675	12.00	32,100	11,235	3,371	42	7,865	111							111
LIGHT RAIL - REMOVAL OF CONTACT WIRE	LF	2675	8.00	21,400	7,490	2,247	28	5,243	74				22	52		
LIGHT RAIL - INSTALLATION OF CONTACT WIRE	LF	2675	20.00	53,500	18,725	5,618	69	13,108	185							185
LIGHT RAIL - BENT 6/7 CAP OCS CROSSBEAM (EAST SIDE) & ANCHORS	LS	1	58,447.46	58,447	20,457	6,137	76	14,320	202	141			605			
LIGHT RAIL - TEMPORARY PORTAL STRUCTURE & FOUNDATION	LS	1	50,000.00	50,000	17,500	5,250	65	12,250	173	121			518			
LIGHT RAIL - FURNISH & INSTALL OCS ASSEMBLIES + SUPPORTS	LS	1	100,000.00	100,000	35,000	10,500	129	24,500	345							345
LIGHT RAIL - OCS POLE RELOCATIONS - (WEST SIDE)	EA	2	25,000.00	50,000	17,500	5,250	65	12,250	173							173
LIGHT RAIL - DEMO & REPLACE IN-SPAN OCS ASSEMBLIES (HANNING)	LS	1	100,000.00	100,000	35,000	10,500	129	24,500	345							345
LIGHT RAIL - LR TRANSIT CENTER SITE RESTORATION	LS	1	100,000.00	100,000	35,000	10,500	129	24,500	345					173		173
<b>1000 - RIGHT OF WAY DEVELOPMENT AND CONTROL</b>																
STORMWATER INFILTRATION PLANTER	LS	1	115,401.74	115,402	40,391	12,117	149	28,273	398	119			119	159		
WEED CONTROL	ACRE	1	2,500.00	2,500	875	263	3	613	9				9			
PERMANENT SEEDING	ACRE	1	4,000.00	4,000	1,400	420	5	980	14					14		
LANDSCAPING & TREES	LS	1	1,000,000.00	1,000,000	350,000	105,000	1,294	245,000	3,451				2,070	1,035	345	
ARCHITECTURAL TREATMENT	LS	1	999,092.00	999,092	349,682	104,905	1,293	244,778	3,448	1,034	690	345	1,379			
CHAIN LINK FENCE	FOOT	569	28.00	15,932	5,576	1,673	21	3,903	55				27	27		
REMOVING AND REBUILDING FENCE	FOOT	100	36.00	3,600	1,260	378	5	882	12				6	6		
<b>1300- Indirect Costs</b>																
General Conditions	LS	1	40,750,313.38	40,750,313	16,200,000	16,200,000	156,000									
Fee	%		21,003,145	21,003,145												
Permits, Bonds, And Insurance	LS	1	12,760,371	12,760,371												
<b>TOTALS</b>				<b>189,300,355</b>	<b>56,327,663</b>	<b>25,509,428</b>	<b>270,749</b>	<b>30,670,652</b>	<b>431,981</b>	<b>103,675</b>	<b>28,708</b>	<b>42,911</b>	<b>134,747</b>	<b>82,063</b>	<b>31,564</b>	<b>6,984</b>
							39%		61%	24%	7%	10%	31%	19%	7%	2%

## **Chapter 2**

### Appendix D: Cultural Competency Curriculum





**I-5 Rose Quarter Improvement Project  
Diversity, Equity & Inclusion 101**

**December 8, 2020**

# Our Core tenets



1. A more equitable **process** is a core **outcome**.
2. Equity and inclusion need to be **integrated** into every facet of the work – they are the what, the how, and the why of our process.
3. Working **collaboratively** with elected leaders, community leaders, and leaders of community-based organizations produces the best and most lasting outcomes.

# Objectives

1. Provide a historical context for the RQ IP

2. Developing a basic understanding of:

Diversity


Equity

Inclusion

3. Strengthen our understanding of DEI concepts and how they apply to the RQ IP

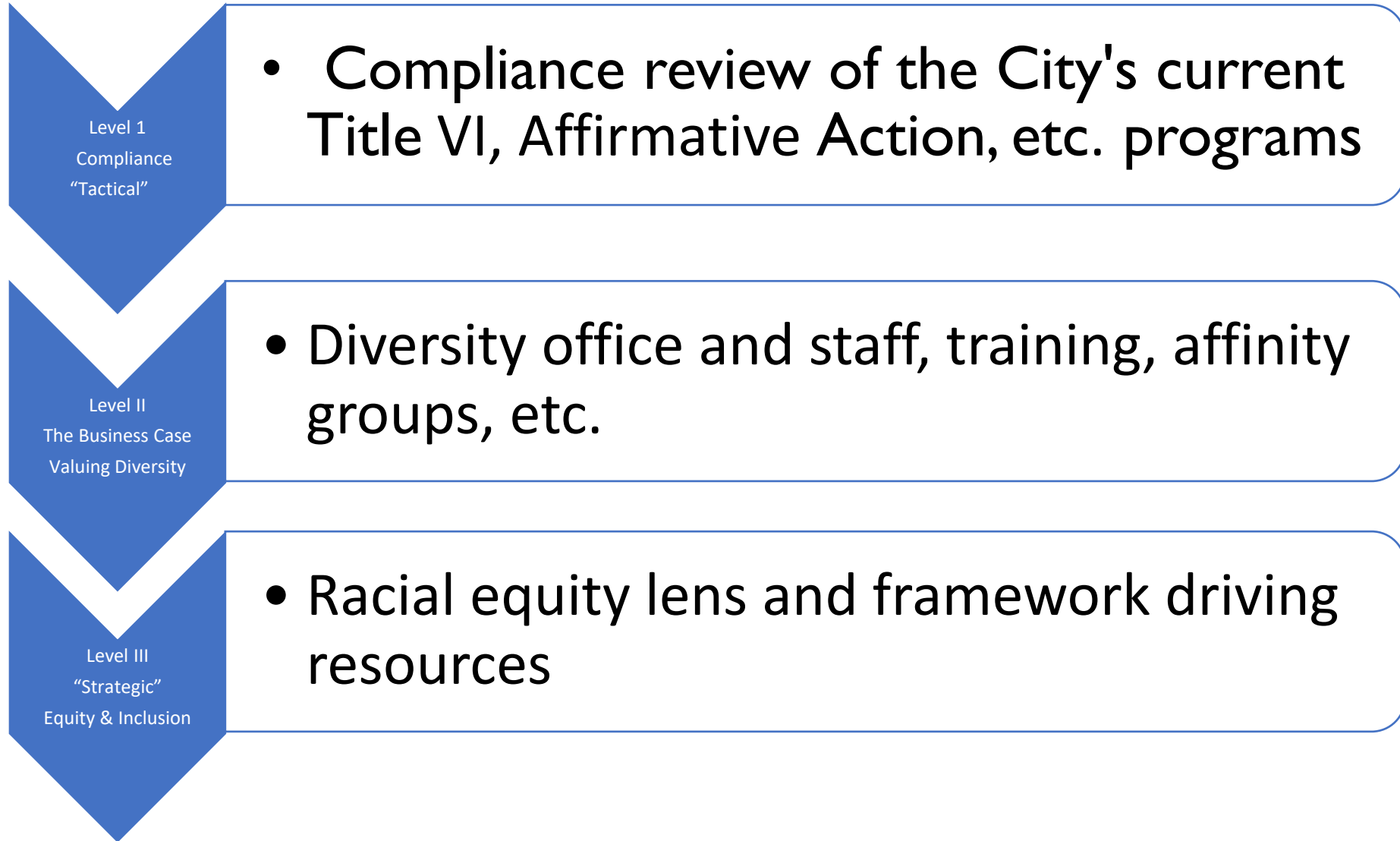
# Community Agreements

- **Stay Engaged**
- **Express Disagreement with Humility and Curiosity**
- **Experience Discomfort**
- **Expect and Accept Non-Closure**
- **Practice Confidentiality**
- **Engaging in critical thinking**
- **Integrating multiple ways of thinking**

A woman with long dark hair, wearing a dark blazer, is smiling and holding a large white sign in front of her. The sign contains the text: "Diversity ignites creativity, problem solving and innovation." The background is a plain, light-colored wall.

Diversity ignites creativity,  
problem solving and innovation.

# DEI CONTINUUM



# Framing

- Transformative change is grounded in an approach of *active hope*:
  - Removing and deconstructing barriers to eliminate harm;
  - Promoting healing actions; and
  - Shifting our awareness, thinking, enacting, and how we are with each other.



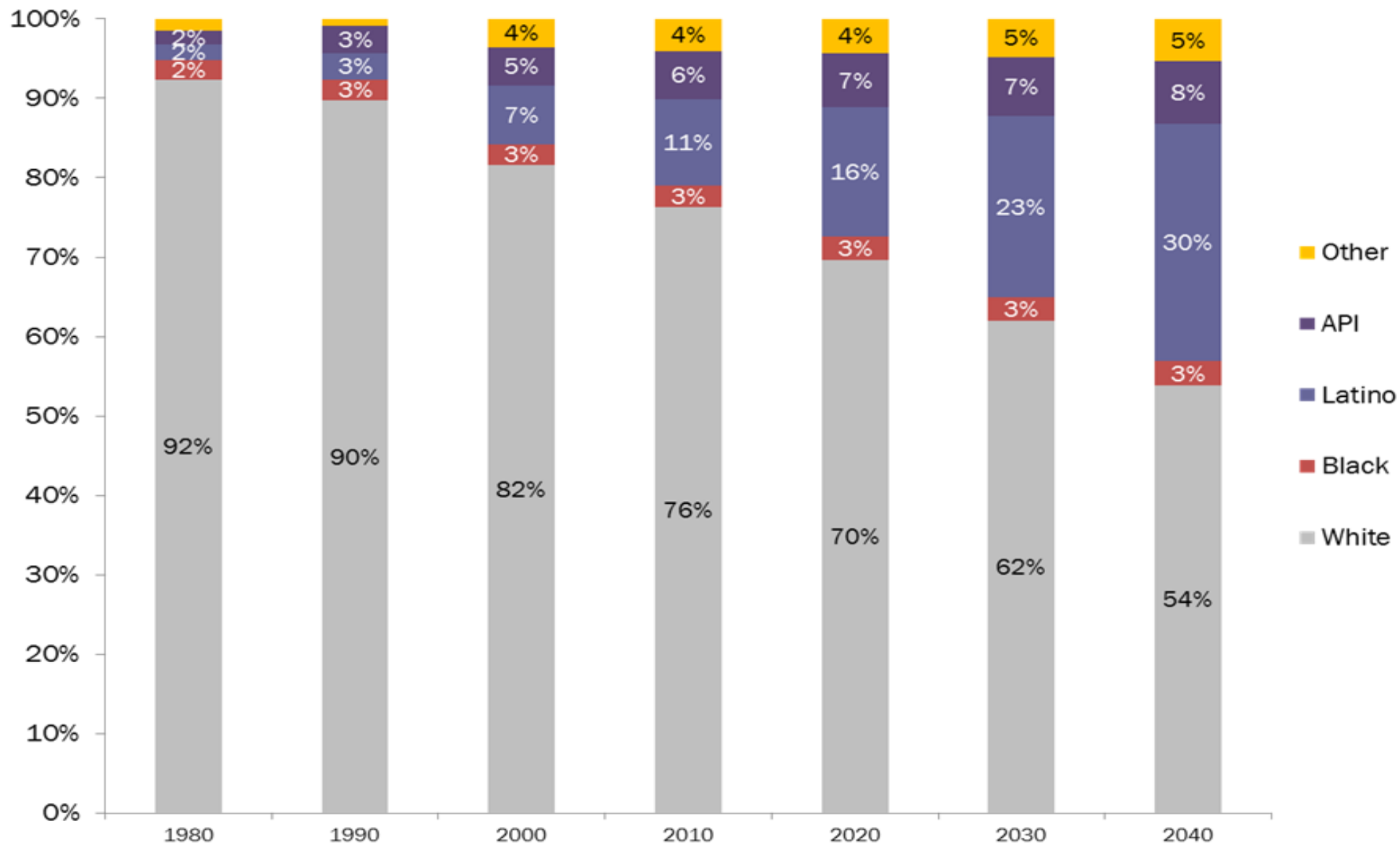
Our region



# Regional Demographics

Race	Washington County	Multnomah County	Clackamas County	All
White	67%	71%	83%	72%
Hispanic/Latino	16%	11%	8%	12%
Asian	10%	7%	4%	7%
Black/African American	2%	5%	1%	3%
Two or more races	4%	4%	3%	4%
Other	1%	2%	1%	1%

## Portland Metro Changing Demographics, 1980-2040



# Demographics of Corridor

	Project Corridor	City of Portland	City of Vancouver	Portland-Vancouver-Hillsboro MSA
White Non-Hispanic/Latinx	72%	71%	72%	73%
Hispanic/Latinx	10%	10%	<b>13%</b>	12%
Black/African American	<b>8%</b>	6%	2%	3%
Multiple races	5%	5%	5%	4%
Asian	3%	8%	5%	7%
American Indian/ Alaska Native	1%	1%	1%	1%
Native Hawaiian/ Other Pacific Islander	1%	1%	1%	<1%
Other	<1%	<1%	<1%	<1%

Source: 2014-2018 5-yr American Community Survey, US Census Bureau



PBS NEWS HOUR

# In small groups...

- What surprised you about the story?
- What did you learn?
- What can we do on this project to help repair some of the harm experienced by African Americans?
- Other observations?



May 1, 1804 — September 1, 1806

### **York travels to Oregon**

York, William Clark's slave, is part of the Lewis and Clark Expedition, the first American expedition to the Pacific Northwest. Native nations treat York with respect, and he "played a key role in diplomatic relations." Upon returning east, Clark describes York as "insolent and sulky" in a letter to his brother, whips and jails him, and threatens to sell him. York's fate is unknown; some historians believe he escaped slavery and lived with the Crow in Wyoming

Source: By Walidah Imarisha, *A Hidden History* (2013) Oregon Humanities





June 25, 1844

### **Oregon excludes Blacks**

The Provisional Government of Oregon enacts the region's first exclusion law against Blacks. This law included the infamous "Lash Law," which required that Black people—whether free or enslaved—be whipped twice a year "until he or she shall quit the territory." This penalty is later changed to forced labor. Jacob Vanderpool, a Black saloonkeeper living in Salem, is the only person known to be expelled from the state.

Source: By Walidah Imarisha, *A Hidden History* (2013) Oregon Humanities



Abstract of votes polled at the special election  
November 9<sup>th</sup>, 1857, in Polk County, O.S.

Whole number of votes cast 726

Name of Precincts	Constitution		Slavery		Free Negroes	
	Yes	No	Yes	No	Yes	No
Dallas	139	51	73	119	14	153
Bridgeport	28	7	14	20	3	22
Suchimute	56	12	38	29	2	57
Sane	26	8	7	27	2	30
Monmouth	84	12	25	70	7	79
Eda	52	7	7	52	3	51
Bethel	50	31	27	53	7	67
Salt Lake	19	3	8	13	-	20
Jackson	38	20	7	53	13	42
Douglas	36	37	25	48	2	63
	528	188	231	484	53	584

Territory of Oregon  
County of Polk

I Lucien Heath Auditor within and  
for said County, do hereby certify the above is a true  
copy of the abstract of the votes polled at said Election  
in said County as remains on file in my office.

Given under my hand and official seal at  
Dallas, O.S., this 19<sup>th</sup> day of November 1857,

Lucien Heath, Auditor

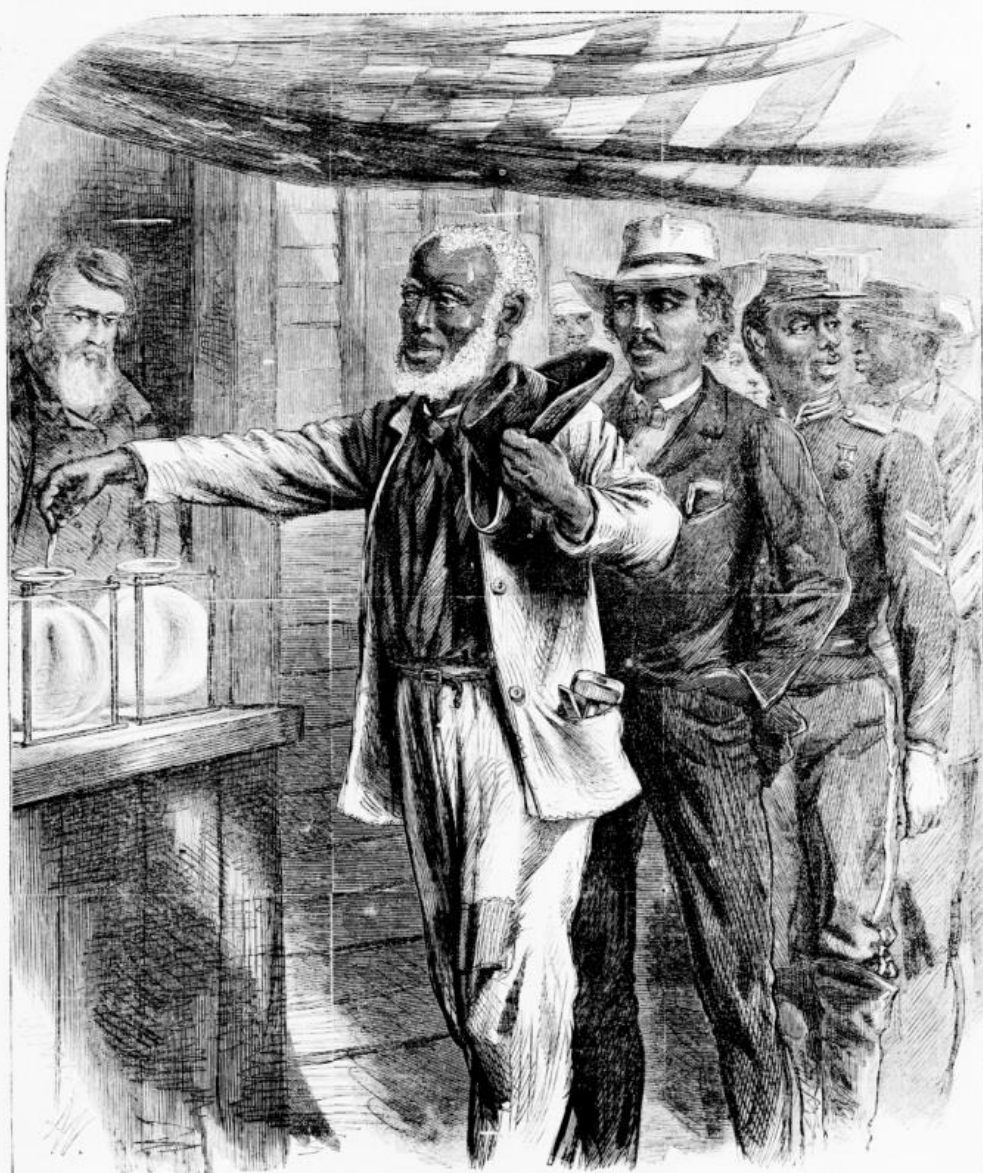


February 14, 1859

## Oregon becomes a state

Oregon became the only state admitted to the union with an exclusion law written into its state constitution. It bans any “free negro, mulatto, not residing in this State at the time” from living, holding real estate, and making any contracts within the state. The 1860 census shows 124 Black people living in the state. The law is repealed in 1926. The language however is not removed from the constitution until 2001. As historian Egbert Oliver writes in Oregon Historical Society Quarterly, “African Americans were essentially illegal aliens in Oregon.”





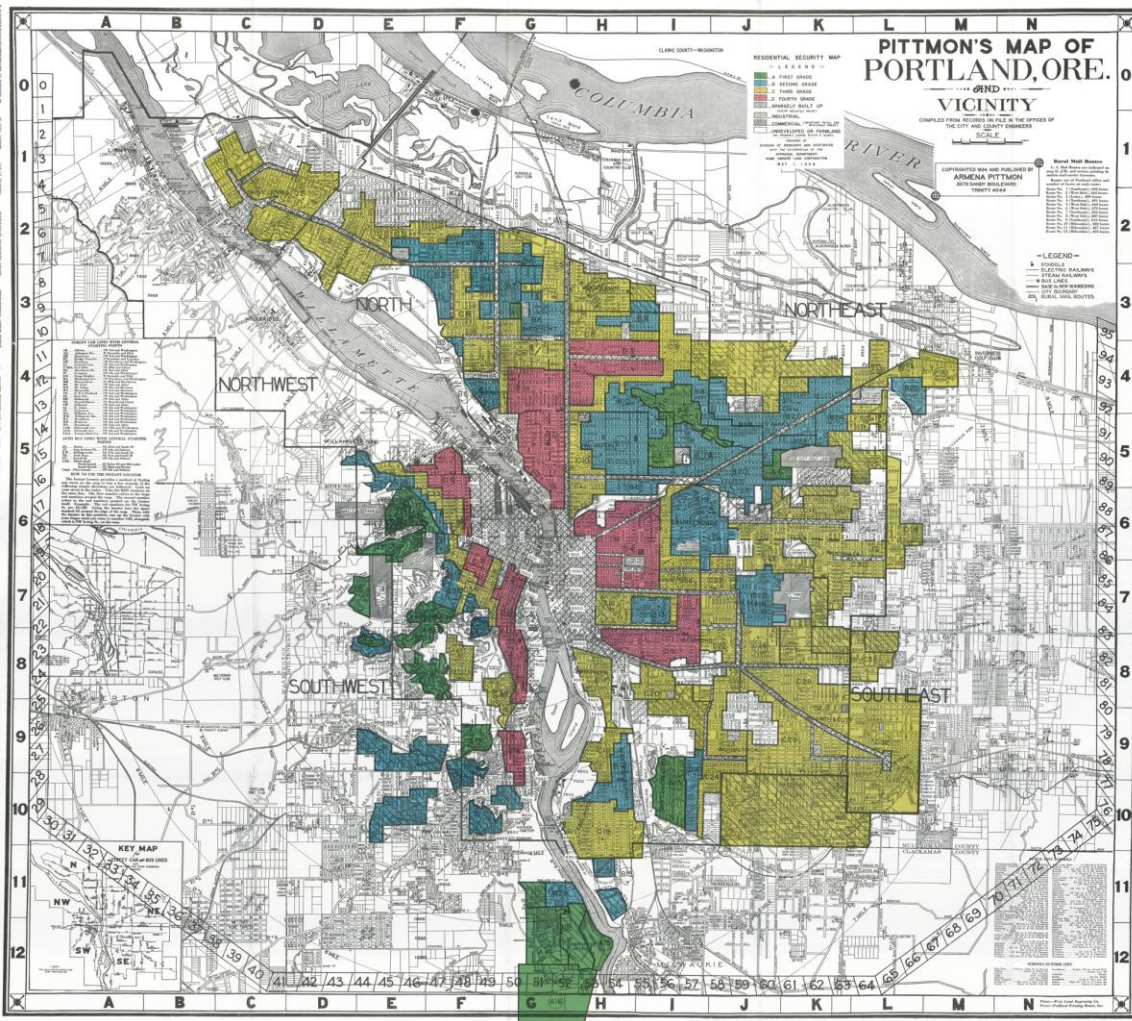
"THE FIRST VOTE."—DRAWN BY A. R. WARD.—[SEE NEXT PAGE.]

February 3, 1870

## **Fifteenth Amendment ratified**

The Fifteenth Amendment, which outlaws voting discrimination based on race, is added to the US Constitution, despite failing to pass in both Oregon and California. This federal law supersedes a clause in the Oregon State Constitution explicitly banning Black suffrage, but the language is not removed from the constitution until 1927 and the Fifteenth Amendment is not ratified in Oregon until 1959

Source: By Walidah Imarisha, *A Hidden History* (2013) Oregon Humanities

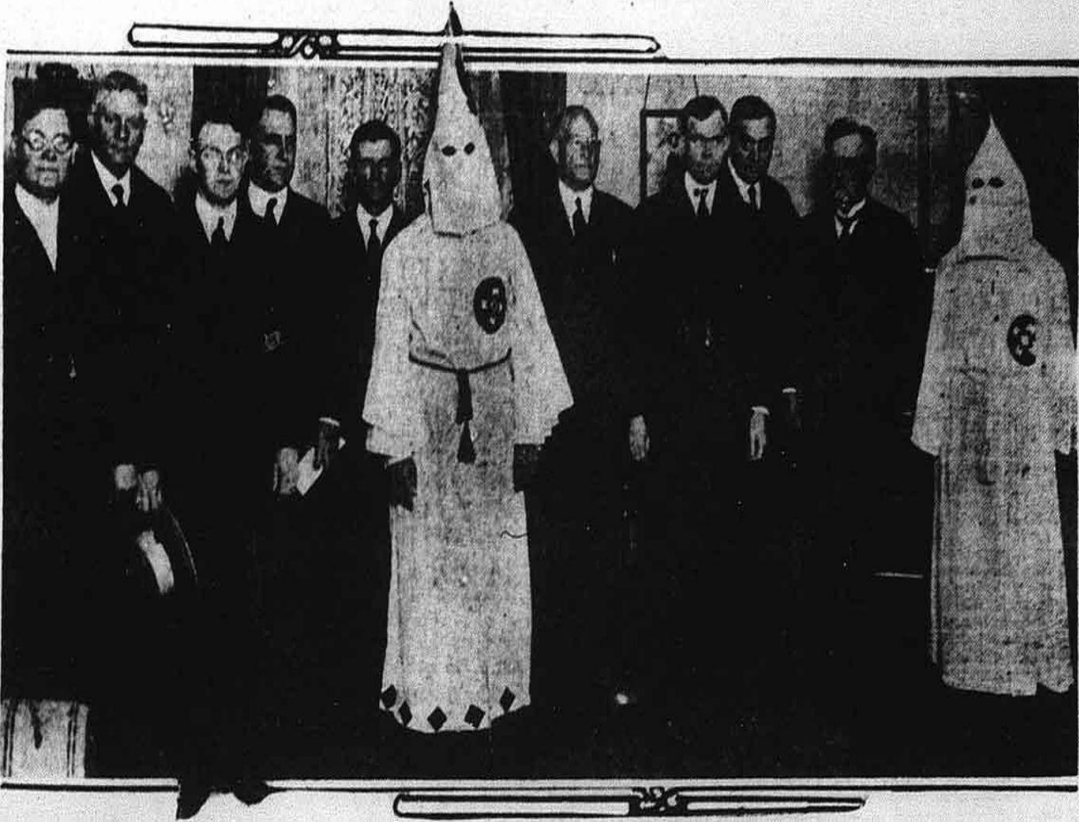


1919

## Redlining in Portland

The Portland Real Estate Board's Code of Ethics mandates that real estate agents not sell to individuals whose race would "greatly depreciate, in the public mind, surrounding property values."

CHIEF KLUXERS TELL LAW ENFORCEMENT OFFICERS JUST WHAT  
MYSTIC ORGANIZATION PROPOSES TO DO IN CITY OF PORTLAND

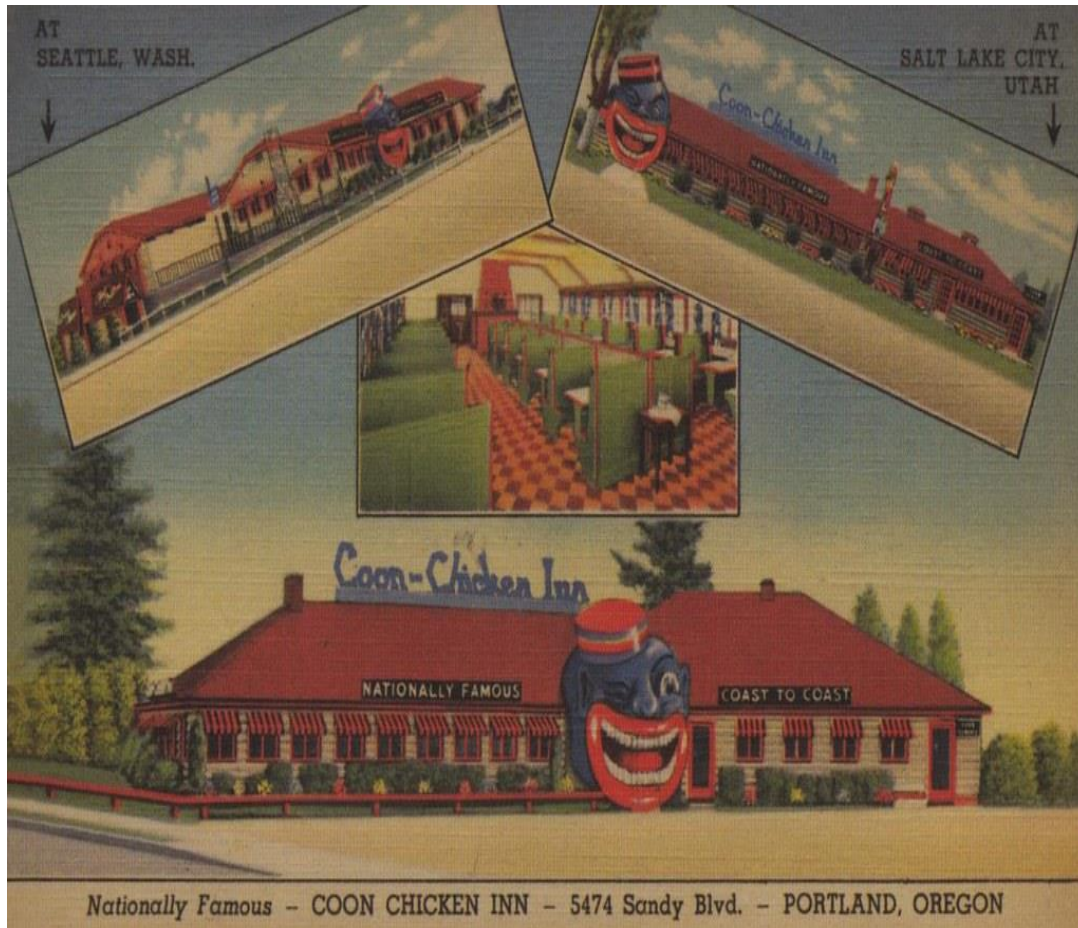


1921

**The Ku Klux Klan establishes its Oregon chapter.**

At the height of its popularity, the Klan claims that 15 percent of eligible Americans (white men) are members. Some of the individuals pictured above include the Portland police chief, a district attorney, a US attorney, a Multnomah County sheriff, and the Portland mayor. The Klan's reign in Oregon is brief, but notorious. Among other things, the organization influences the election of 1922, unseating the gubernatorial incumbent, Ben Olcott, who is an outspoken critic of the Klan.

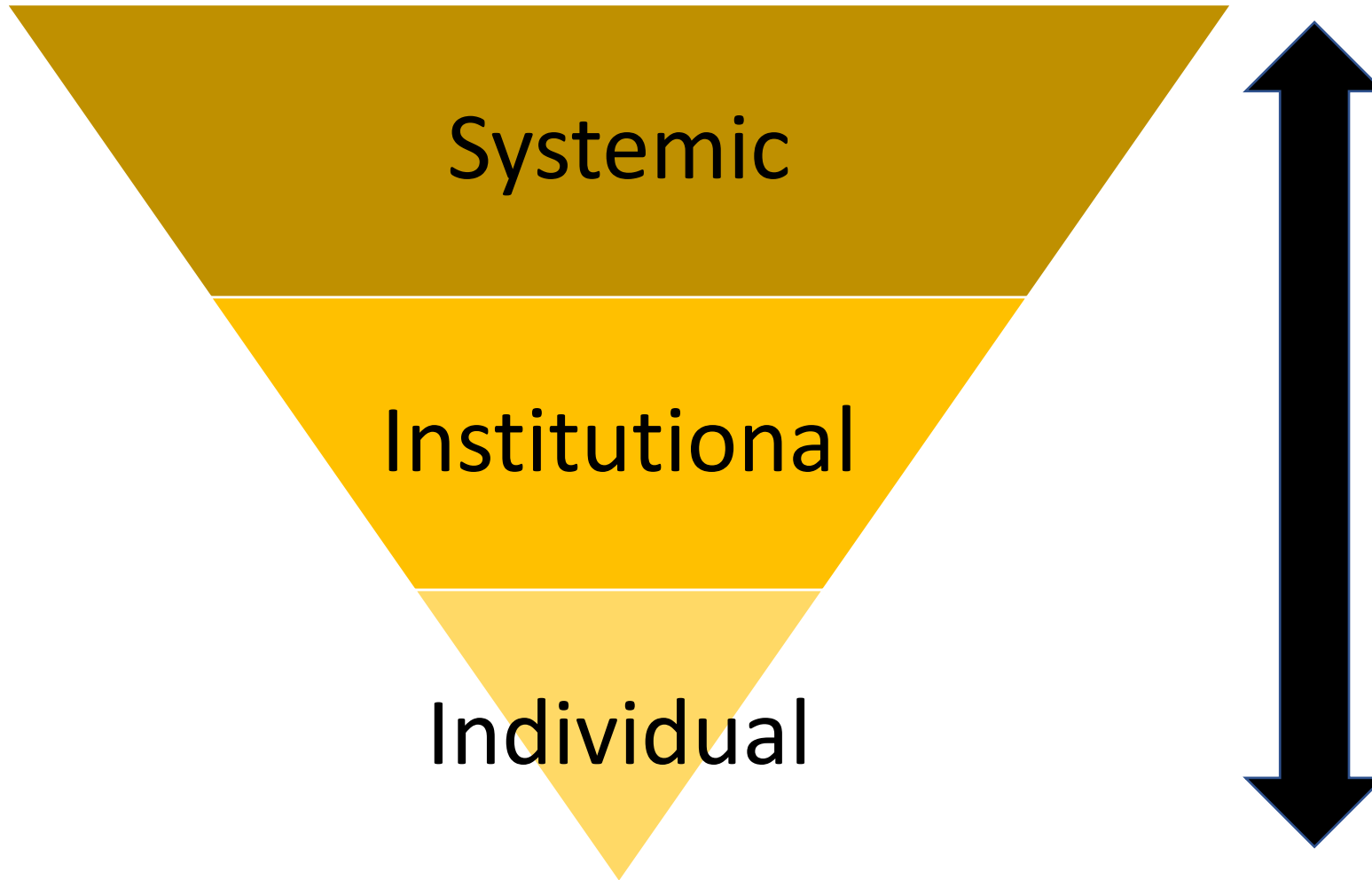




## **American chain of restaurants, opens in Salt Lake City.**

Diners enter through a door that portrays the mouth of a smiling blackface caricature. The chain's third restaurant opens in 1930 in Portland's Hollywood District. A restaurant with a similar history, Lil Sambo's (formerly Lil Black Sambo's), still operates today in Lincoln City.

# Types of Inequity



Systemic

Institutional

Individual

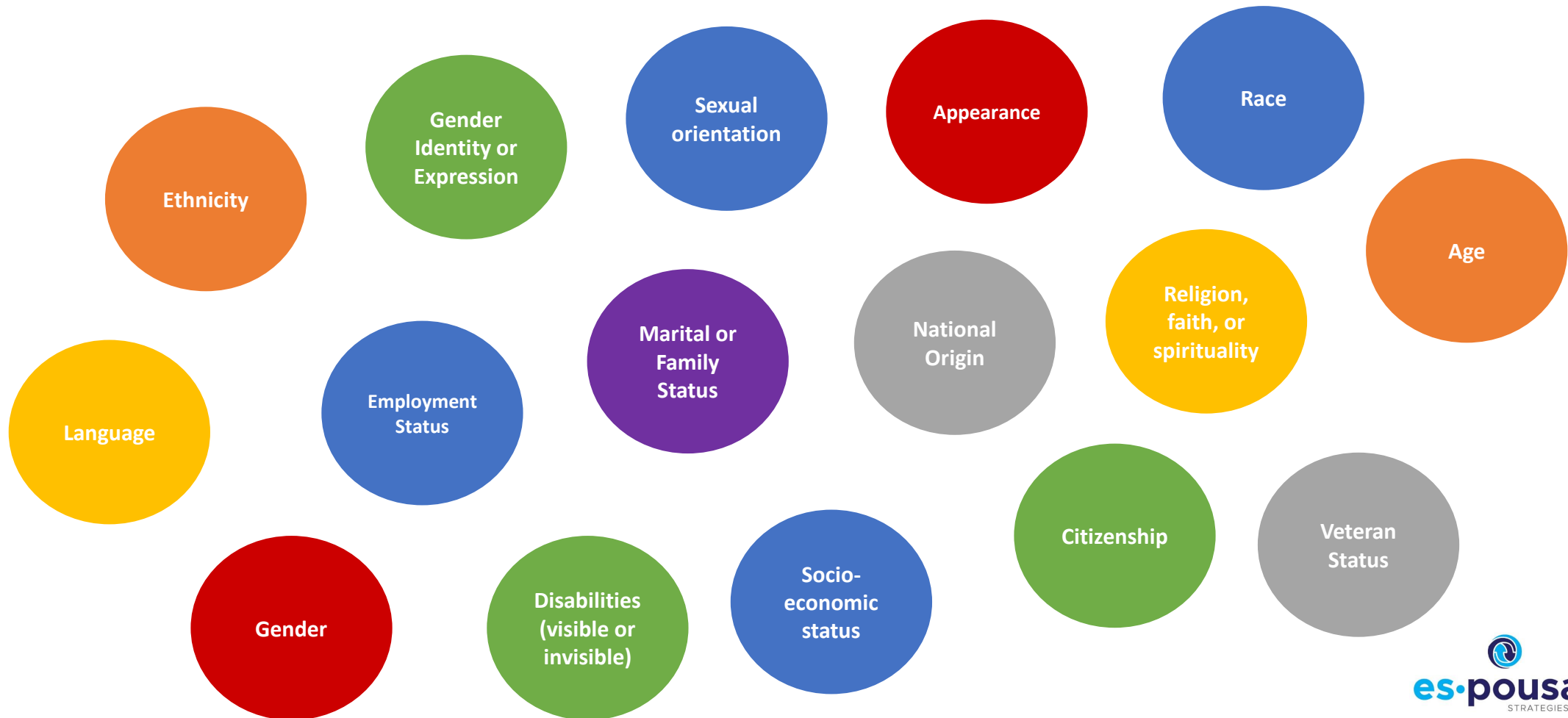


What is diversity?

Take a few moments to jot down what you think of when you hear the word “**diversity**”

# Diversity

Diversity includes all the ways in which people **differ**, and it encompasses all the different characteristics that make one individual or group different from one another.





# Race

How the US Census Bureau defines race:

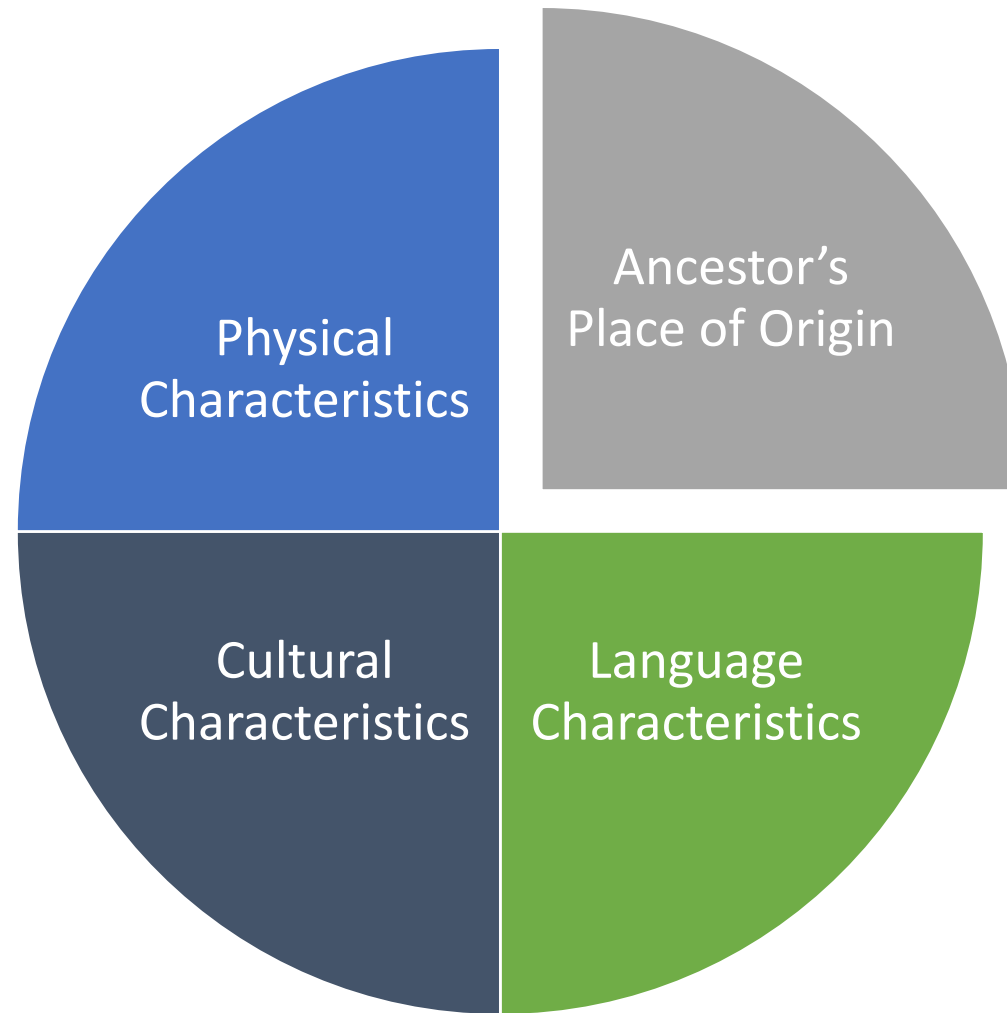
- American Indian or Alaskan Native
- Native Hawaiian or Pacific Islander
- Black or African American
- Asian
- White

\*The Census defines Hispanic/Latino as an *ethnicity* instead of a race

**BUT...this is not hard science**

- North African/Middle-Eastern
- Irish, Italian, Jewish Americans weren't always considered white
- Line between race and ethnicity?

# National Origin





What is Equity?

Take a few moments to jot down what you think of when you hear the word “**equity**”

# Equity

- Basic definition: When one's **identity** cannot predict the **outcome**. Absence of inequities and injustices in social sectors that are required for all to thrive. Both an outcome and a process.
  - Provides opportunities and access so that every person can achieve his/her full potential. Equitable treatment involves acknowledging diversity, recognizing and celebrating our differences.

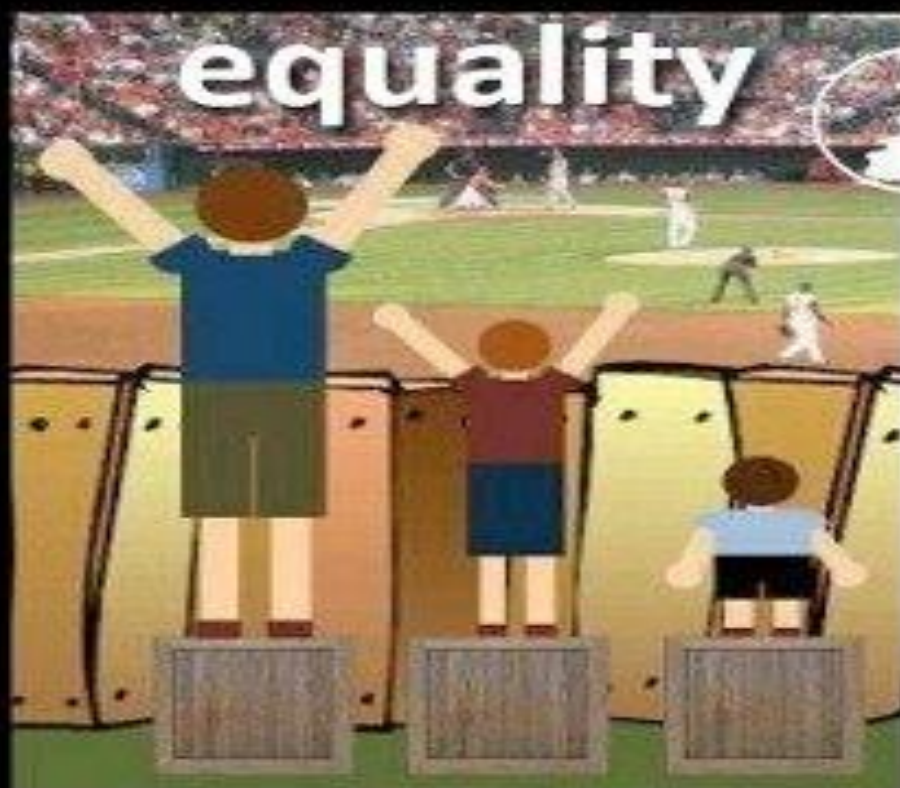


**EQUALITY**



**EQUITY**

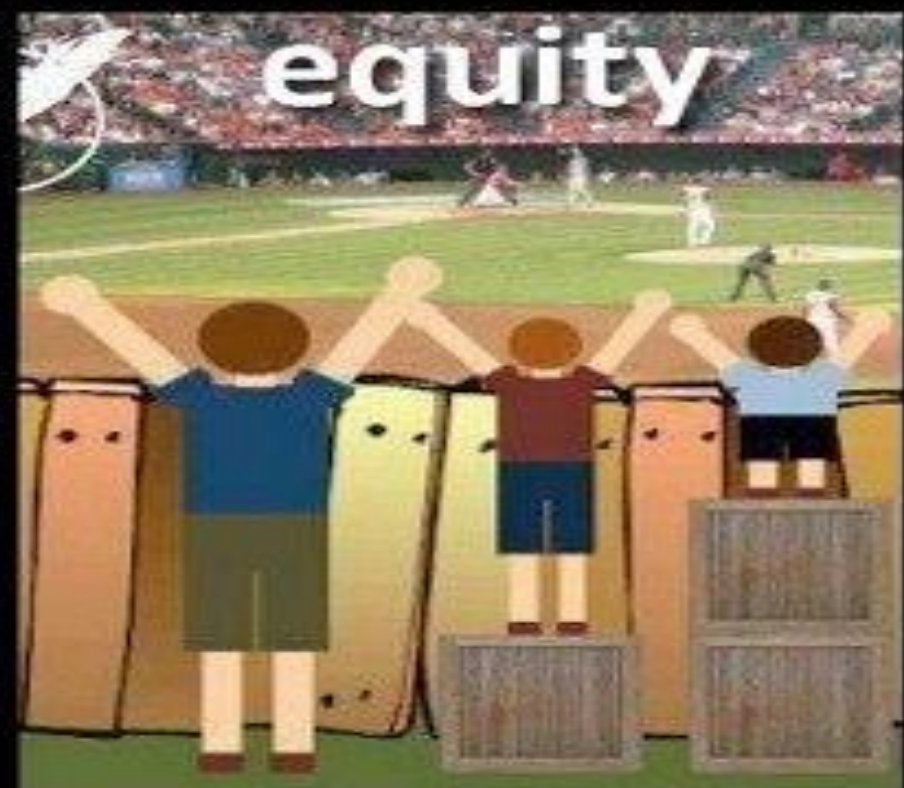




### **Equality = SAMENESS**

**Equality** is about **SAMENESS**, it promotes fairness and justice by giving everyone the same thing.

**BUT** it can **only work IF everyone starts from the SAME place**, in this example equality only works if everyone is the same height.



### **Equity = FAIRNESS**

**EQUITY** is about **FAIRNESS**, it's about making sure people get access to the same opportunities.

Sometimes our differences and/or history, can create barriers to participation, so we must **FIRST ensure EQUITY** before we can enjoy equality.

The image features a central, dark blue, irregularly shaped graphic that resembles a splatter or a hand-drawn ink blot. The graphic has a textured, slightly grainy appearance and is surrounded by a lighter blue, splattered background. The text "What is Inclusion?" is written in a clean, white, sans-serif font, centered within the dark blue area.

What is Inclusion?

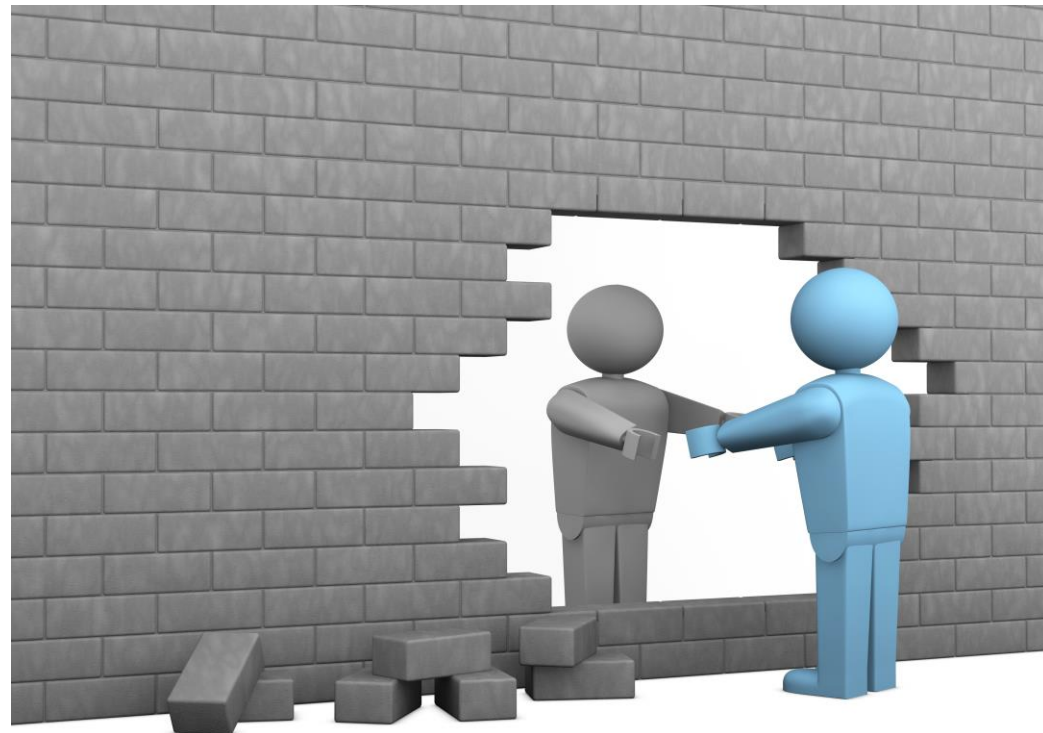


Take a few moments to jot down what you think of when you hear the word **“inclusion”**

# 3 Pillars for Inclusion and Diversity

# Inclusion

Basic definition: Eliminating the barriers that prevent the full participation of all people.

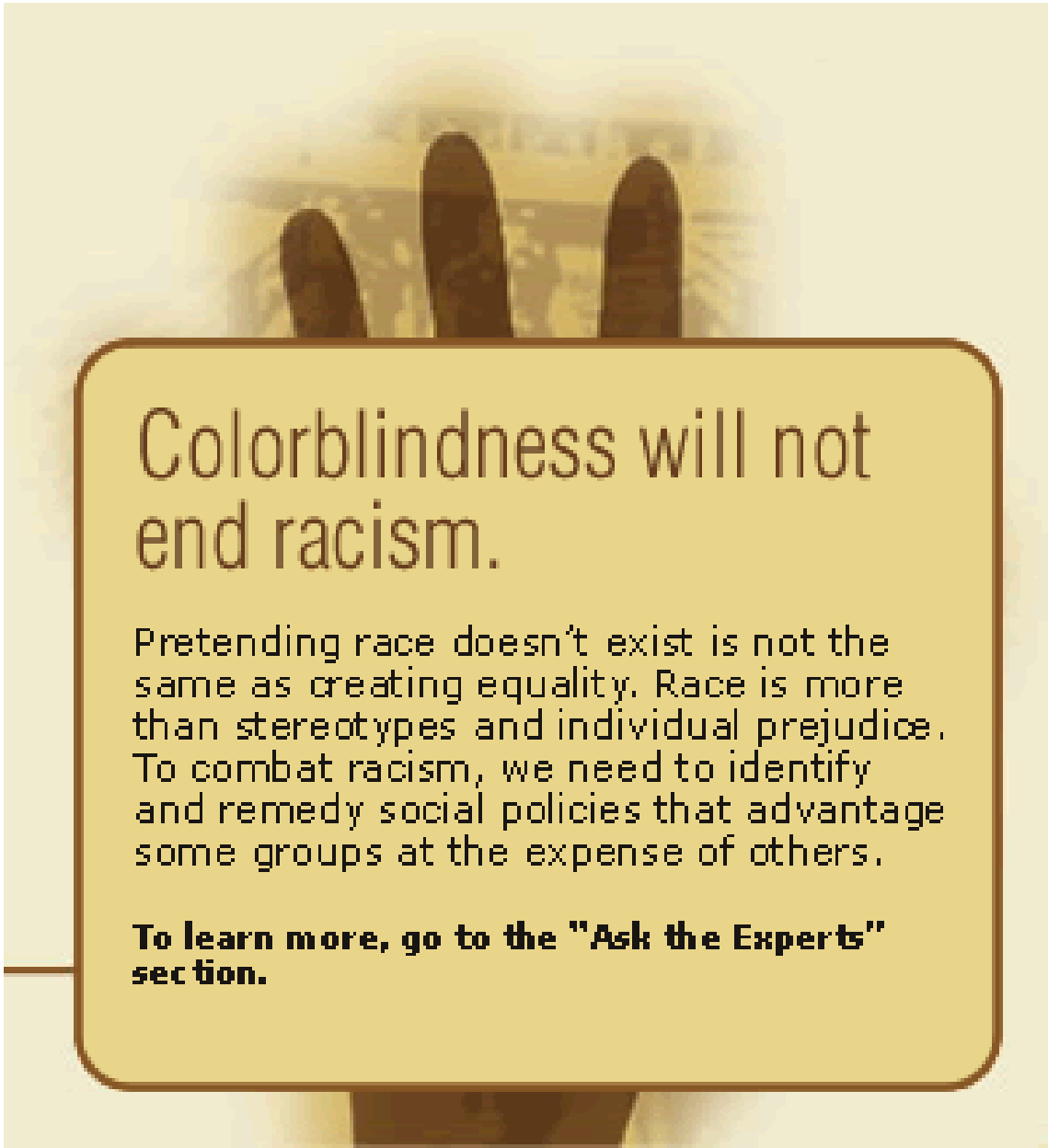


# Color Discrimination

---

Preference for or aversion to persons of different skin colors, regardless of whether the actor is in the same racial or national origin group



A hand with dark skin is holding a light-colored sign with a dark border. The sign contains text about colorblindness and racism. The background is a soft, out-of-focus image of a hand.

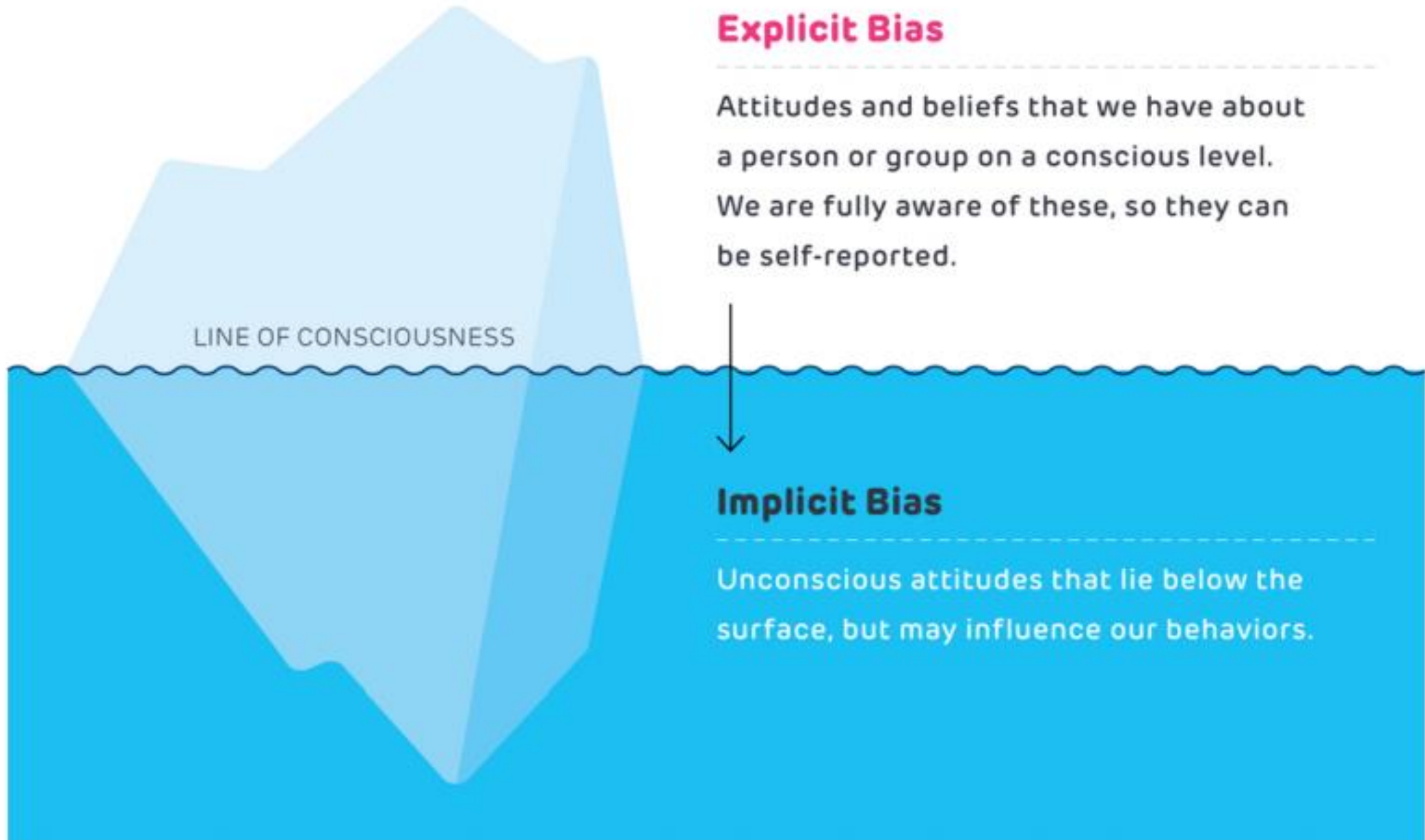
## Colorblindness will not end racism.

Pretending race doesn't exist is not the same as creating equality. Race is more than stereotypes and individual prejudice. To combat racism, we need to identify and remedy social policies that advantage some groups at the expense of others.

**To learn more, go to the "Ask the Experts" section.**



**Micro  
Aggressions**



Source: Zan Gibbs, City of San Antonio Office of Equity (2019)

# **Our Foundational Assumptions**



## How we define racial equity:

- **Race can no longer be used to predict life outcomes and outcomes for all groups are improved**
- **Fair and just distribution of resources and opportunities**
- **Economic and social systems that are sustainable and sustain all people**
- **Meaningful engagement of communities of color in planning, decision-making, evaluation**
- **Authentically embodying racial equity and empowerment principles**
- **Bold and courageous long-term commitment to unearthing racism's root causes and addressing barriers**



Community and collective well-being requires system-wide approaches in all sectors: environmental, political, social, economic, and educational.



Social and racial inequities are avoidable, unjust, and preventable.



Social injustice and racism remain due to an intricately woven web of systemic, institutional, interpersonal, and individual biases, discriminatory actions, and beliefs.

# Framing

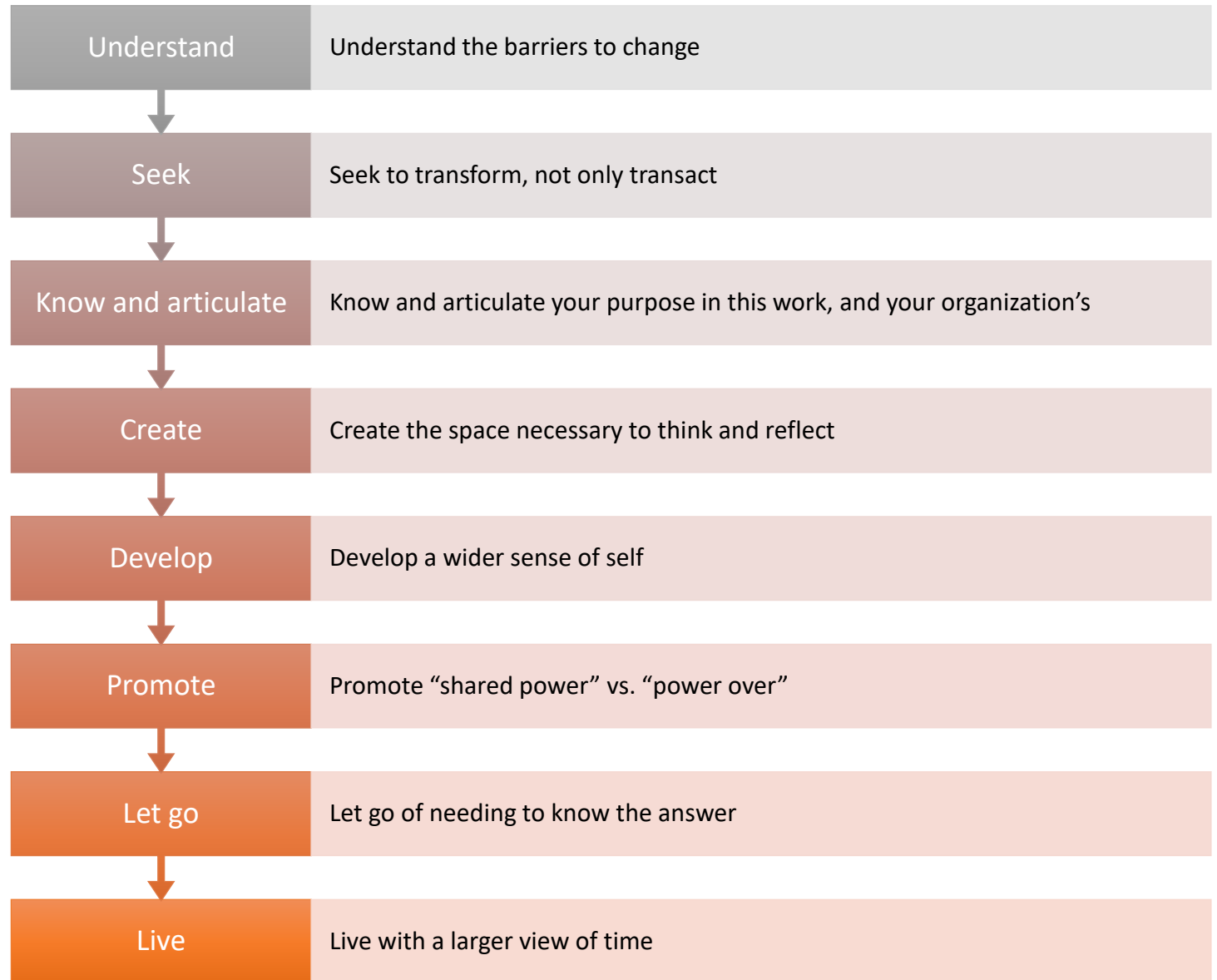
WHAT  
is it?

# SOCIAL DETERMINANTS FRAMEWORK

The following graphic illustrates another way to visualize the continuum of upstream, midstream, and downstream actions needed to eliminate the root causes of inequities, with a few sample strategies provided.



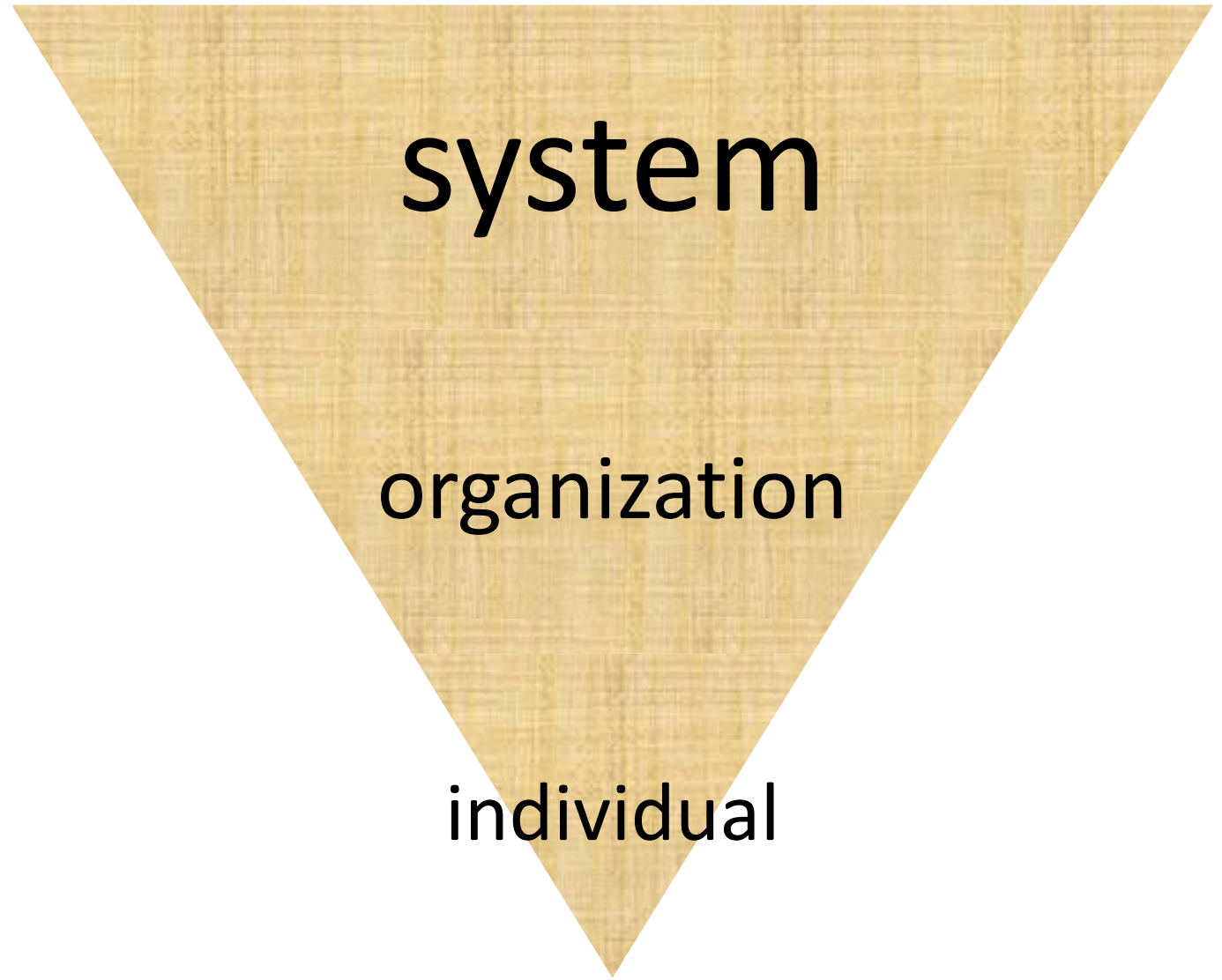
# CREATING THE CONDITIONS



# Operationalizing DEI



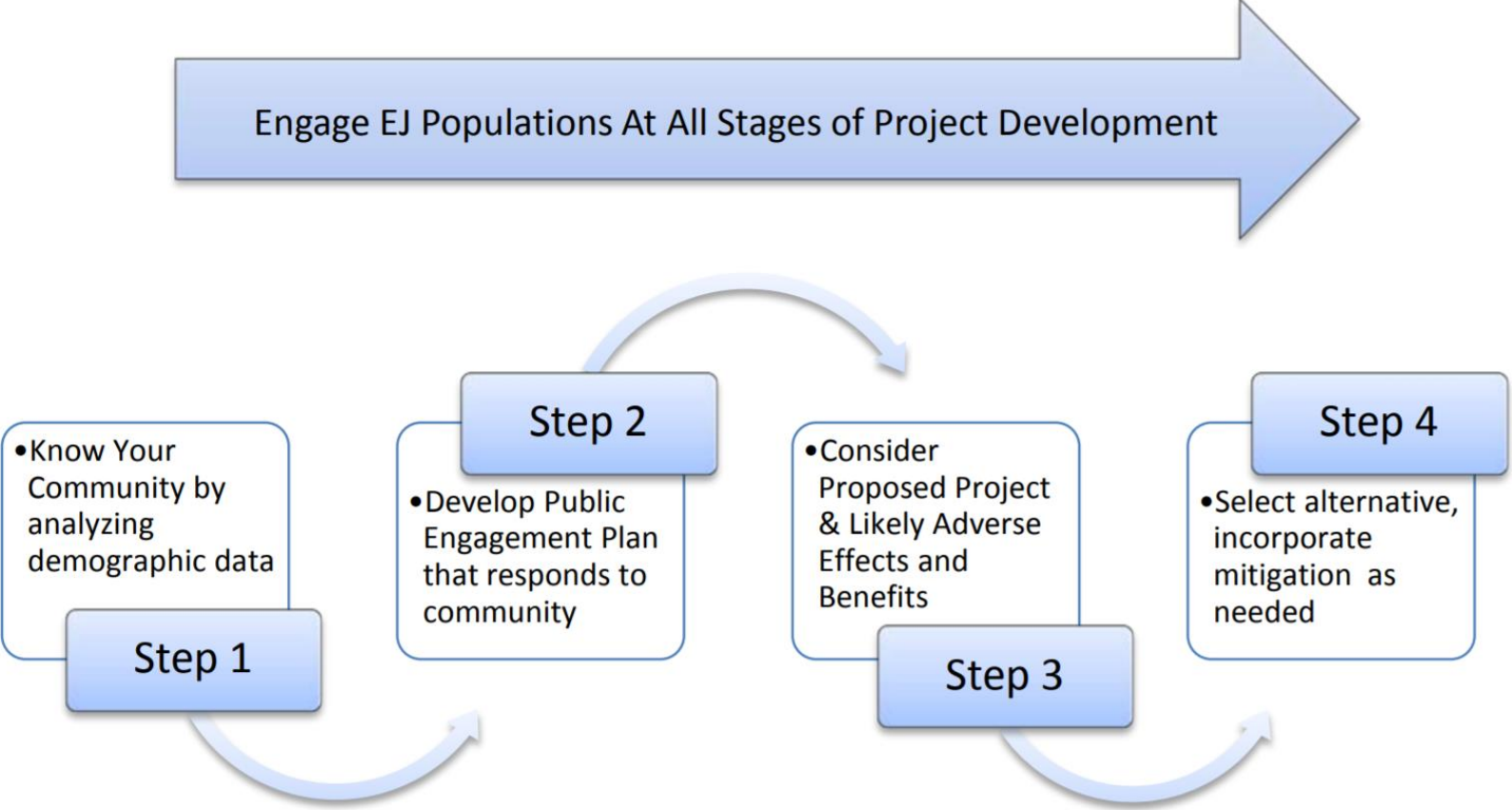
A strong structure  
address 3 levels of  
change



# Recipe for being a DEI Champion

- Looking for ways to make things work
- Inclusive problem solving
- Transparency
- Creating peer relationships with national partners in same positions
- Never start with “no” or “we don’t do things that way” or other ways of weighing down efforts.
- Look for aspirational goals and future directions
- Continuous learner of DEI in practice in local government

# FTA Environmental Justice Circular





# Environmental Justice in Transportation



## DOT/FTA Guiding Principles

- To ensure the **full and fair participation** by all potentially affected communities in the transportation decision-making process;
- To **avoid, minimize, or mitigate** disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority or low-income populations; and
- To prevent the denial of, reduction in, or significant delay in the **receipt of benefits** by minority or low-income populations.

# Transportation Equity

- More than just compliance with federal requirements
- About access:
  - To the **system itself** (i.e. physical, financial)
  - To the **services & opportunities** (e.g. jobs) that the system connects users to (e.g. transit service levels & coverage)
  - For **all users**, with a particular focus on those most historically transportation disadvantaged

*Image credit: civilrightsteaching.org*



# Changing the frame

- How might a project look if...
  - **It Disproportionately benefited** historically marginalized ?
  - It **Centered** the voices of historically marginalized communities?
  - The process (planning, engagement, etc.) were considered concrete outcomes?

# Applying an “equity lens”



Formal



Informal

**“A transformative quality improvement tool used to improve planning, decision-making, and resource allocation leading to more racially equitable policies and programs.”**

**–Multnomah County Equity & Empowerment Lens**

**A general mindset: Are we considering how communities of concern might be impacted? How so?**

### People

Who is positively and negatively affected and how?  
How are people differently situated in terms of the barriers they experience?  
Are people traumatized/re-traumatized by you in this area?  
People you are not serving, unmet needs?  
Does your strategy offer simplistic analyses that ignores complexity of the situation?

### Place

How are you accounting for people's emotional and physical safety?  
How are you considering environmental impacts?  
How are public resources distributed geographically? How do you know?  
Is there a triggering problem or opportunity? What is the history of this situation or issue? Has the problem been "fixed" before?



Issue/Decision

### Process

How are you meaningfully including the people most affected by the issue?  
What policies, processes, social relationships contribute to the exclusion of communities most affected?  
Are there empowering processes at every human touchpoint?  
What processes are traumatizing and how do we improve them?  
What brought this situation to your attention?

### Power

What are the barriers you are facing?  
What are the benefits and burdens the community experiences?  
Who is accountable?  
What is your decision making structure?  
What drivers are contributing to this issue?  
What kind of data are you using to make your decisions?  
What if we don't do anything?  
Why is this a priority now?

PURPOSE

# Recipe for being an Equity Champion

- Looking for ways to make things work
- Inclusive problem solving
- Transparency
- Creating peer relationships with national partners in same positions
- Never start with “no” or “we don’t do things that way” or other ways of weighing down efforts.
- Look for aspirational goals and future directions
- Continuous learner of DEI in practice in local government

**thank**•**you**

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## **Chapter 2**

### Appendix E: Acceptable Worksite Program



## Appendix E: Acceptable Worksite program



## **Chapter 2**

### Appendix F: Organizational Chart

# Appendix F: Organizational Chart

