

MONORAIL EASEMENT AND OPERATING AGREEMENT  
between the City of Seattle and ROUGE-  
SEATTLE, INC.; filed pursuant to Ordinance 113272

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MONORAIL OPERATING AND EASEMENT AGREEMENT

by and between

WESTLAKE CENTER ASSOCIATES  
LIMITED PARTNERSHIP

and

THE CITY OF SEATTLE

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TABLE OF CONTENTS

Section 1	Definitions .....	2
Section 2	Construction; Design Standards and Scope of Work .....	4
Section 3	Completion of Construction; Construction Schedule .....	6
Section 4	Payment for Construction; Cost Savings .....	8
Section 5	Temporary Monorail Station .....	10
Section 6	Quality of Construction; Mechanic's .....	10
Section 7	Alterations .....	12
Section 8	Easements and Ramp Modifications .....	14
Section 9	Restrictions Respecting Easement Areas .....	17
Section 10	Associates' use and Operating Covenant .....	26
Section 11	Use and Operating Covenant of the City .....	26
Section 12	Maintenance, Security and Utilities .....	28
Section 13	Payment .....	31
Section 14	Liability Insurance .....	31
Section 15	General Contractor's Insurance .....	32
Section 16	Indemnity .....	33
Section 17	Damage and Destruction .....	33
Section 18	Election not to Rebuild .....	34
Section 19	Mortgages .....	37
Section 20	Release Upon Transfer .....	38
Section 21	Rights of Self-Help .....	39
Section 22	Duration of Rights .....	41
Section 23	No Termination and Re-negotiation Rights .....	41
Section 24	Remedies Not Exclusive .....	42
Section 25	Rights of Mortgagees .....	42
Section 26	Termination Date .....	43
Section 27	Compliance with Laws .....	45
Section 28	Arbitration .....	46
Section 29	Notices .....	47
Section 30	Section Headings .....	48
Section 31	Successors .....	48
Section 32	Real Estate Commissions .....	49
Section 33	Estoppel Certificates .....	49
Section 34	No Waiver .....	50
Section 35	Partial Invalidity .....	50
Section 36	Rights Cumulative .....	51
Section 37	Waivers and Consents .....	51
Section 38	Entire Agreement .....	51
Section 39	Transfer; Binding Nature .....	52
Section 40	No Partnership .....	52
Section 41	Expense of Obligations .....	53
Section 42	Unavoidable Delay .....	53
Section 43	Recordation .....	54
Section 44	Number and Gender .....	54
Section 45	No Third Party Rights .....	54
Section 46	Governing Law .....	54

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MONORAIL OPERATING AND EASEMENT AGREEMENT

THIS AGREEMENT made as of the \_\_\_\_\_ day of January, 1987, by and between the City of Seattle, a municipal corporation of the State of Washington, having its office at the Seattle Municipal Building, 600 Fourth Avenue, in The City of Seattle, Washington (hereinafter called "City") and Westlake Center Associates Limited Partnership (hereinafter "Associates"), a Washington limited partnership whose general partners are Rouse-Seattle, Inc., a Maryland corporation and Westlake 7 Building Partners Limited Partnership, a Washington limited partnership.

W I T N E S S E T H:

WHEREAS, pursuant to a Contract for Sale of Property dated August 17, 1984, as amended (the "Contract") between the City and Rouse-Seattle, Inc., predecessor in interest to Associates, the City has conveyed to Associates Lots 1, 3, 8, 9, 10, 11 and 12 located on Block 1 in the City of Seattle and Associates has acquired separately Lots 2 and 7 of Block 1 (the "Property" as more particularly described in Exhibit A attached hereto and made a part hereof); and

WHEREAS, pursuant to the Contract (the interest of Rouse-Seattle, Inc. therein having been assigned to Associates), Associates is to develop on the Property and certain adjacent property a mixed use office, retail and garage complex (the "Westlake Project"); and

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WHEREAS, pursuant to the Contract, Associates is to construct the Westlake Project so as to provide access through the Westlake Project and over and upon a platform located within the Westlake Project, constructed by Associates and designed to allow pedestrians to enter monorail trains operating on elevated tracks to be constructed by the City adjacent to Block 1 on the easterly side of the Westlake Project; and

WHEREAS, pursuant to the Contract, the City has agreed to construct and operate such elevated monorail tracks as part of the monorail system serving the City of Seattle and extending from Seattle Center to the Westlake Project; and

WHEREAS, the Contract provides for the City and Associates to enter into an agreement respecting construction, maintenance, use and operation of such elevated monorail tracks, monorail platform and associated pedestrian access, and respecting easements to be granted in order to preserve such pedestrian access; and

WHEREAS, the City and Associates have agreed as to such matters.

NOW, THEREFORE, in consideration of the promises and the mutual obligations herein undertaken and other good and valuable consideration, the City and Associates agree as follows:

Section 1. Definitions. In addition to the terms defined in the recitals of this Agreement, as used herein, the following terms have the following definition:

"Improvements" means the buildings and permanent improvements to be constructed by Associates on the property and certain

adjacent property in accordance with the Contract and which will upon completion constitute the Westlake Project.

"Monorail System" means the elevated monorail public transit system owned and operated by the City and extending from Seattle Center to the Westlake Project and all equipment appurtenant thereto and necessary or appropriate for the operation of such public transit system, including but not limited to stations, terminals, trackage, trains and rolling stock and switching equipment.

"Monorail Station" means that portion of the Monorail System consisting of elevated monorail tracks constructed or to be constructed by the City pursuant to the Contract and this Agreement and located adjacent to Block 1 on the easterly side of the Westlake Project and generally in the location shown on the Site Plan attached hereto as Exhibit B and made a part hereof, together with all improvements and equipment necessary for the safe and proper use and operation of the Monorail Station, including without limitation pilings, supports, tracks and switching equipment, but not including the hereinafter defined Monorail Station Platform.

"Monorail Station Platform" means that portion of the Improvements constructed by Associates pursuant to the Contract and this Agreement consisting of a passenger terminal, including but not limited to a concrete platform, walls, ceilings, glass canopy, stairs, and an elevator located adjacent to the Monorail Station generally as shown on Exhibit B (but not constituting a

part of the Monorail Station), which will serve as an area through which passengers may enter upon or exit from the Monorail Station.

Section 2. Construction; Design Standards and Scope of Work.

Attached hereto as Exhibit C are design standards and a scope of work applicable to the construction of the Monorail Station by the City and Monorail Station Platform by Associates. Associates shall complete base building construction, finish work, lighting, signage and other improvements described in Exhibit C hereof respecting the Monorail Station Platform ("Associates' Work") in accordance with plans and specifications consistent with such design standards and scope of work (to the extent applicable to the Monorail Station Platform) and approved by the City, as part of the plans and specifications for construction of the Improvements, in the manner set forth in the Contract. The City shall construct the sliding ramps ("Ramps") which connect to and extend from the Monorail Station Platform and shall complete other improvements (including, without limitation, platform handrails, ticket issuing machines and kiosk interior) respecting the Monorail Station Platform ("City Work") and shall construct all portions of the Monorail System (including, without limitation, the Monorail Station) other than the Monorail Station Platform, and it shall construct its improvements respecting the Monorail Station Platform and the Monorail Station in accordance with plans and specifications consistent with such design standards and scope of work (to the extent applicable to the Monorail Station Platform and Monorail Station) and approved as to appearance by Associates.

All such improvements of the City as are located within the Improvements shall be located upon the Monorail Station Platform except that the City may install ticket issuing machines, as approved by Associates, at the other locations. Associates shall submit its plans and specifications for the Monorail Station Platform to the City as part of its plans and specifications for the Improvements to be submitted pursuant to the Contract and within the time frames set forth in the Contract. The City shall use its reasonable efforts to submit its design development plans and specifications for its improvements to the Monorail Station Platform and for the Monorail Station to Associates on or prior to January 1, 1987, and to submit to Associates its construction plans and specifications for its improvements to the Monorail Station Platform and for the Monorail Station on or prior to March 1, 1987. Associates shall approve or disapprove the plans and specifications of the City within the time frames (i.e., 15 working days) applicable to the City's approval of Associates plans and specifications under the Contract, and such plans and specifications shall be deemed approved by Associates unless the City is notified to the contrary within 15 working days following submission. If Associates disapproves the plans and specifications of the City, Associates shall so notify the City in writing and state the specific reasons therefor. Following such notification, the City shall either resubmit corrected plans and specifications to Associates for approval or incorporate such corrections as are requested by Associates in the City's subsequent plans.

The right of Associates and the City to disapprove plans and specifications respecting the Monorail Station and Monorail Station Platform shall be exercised in a reasonable fashion and limited to matters (1) which are not consistent developments of the design standards and scope of work set forth in Exhibit C or plans and specifications previously approved respecting the Monorail Station or Monorail Station Platform, as the case may be or (2) which are new and material architectural or design elements not depicted or described in Exhibit C or in previously approved plans and specifications. Any bona fide dispute as to whether disapproval of plans and specifications or any amendment or modification thereof is allowed hereunder shall be resolved by arbitration in the manner set forth in Section 10(D) of the Contract.

Section 3. Completion of Construction; Construction Schedule. Associates shall use its reasonable efforts to complete base building construction of the Monorail Station Platform, as part of the Improvements, in accordance with the schedule for completion of the Improvements as set forth in the Contract. The City shall likewise use its reasonable efforts to complete construction of the Monorail System and Monorail Station in accordance with the Schedule set forth in the Contract. The parties intend that the Monorail System, Monorail Station and Monorail Station Platform shall be complete and operational so that the Monorail System will be open and available for passenger service to and from the Monorail Station Platform on the Scheduled Opening

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Date (as defined in the Contract). In addition, Associates shall use its reasonable efforts to complete its work respecting the Monorail Station Platform (excluding pedestrian access) sufficient to allow the City access to the Monorail Station Platform for construction and testing purposes pursuant to Section 9(b)(vii) hereof.

In the event the Monorail Station Platform and retail portions of the Improvements are open for business or ready to open for business (as defined in the Contract) on the Scheduled Opening Date but the Monorail Station is not open for business (as defined in the Contract), Associates shall have the rights set forth in the Contract, and exercise of such rights shall be without limitation of any other rights and remedies of Associates under the Contract resulting from the City's failure to comply with its obligations and undertakings set forth therein (including, without limitation, those respecting streetscaping and Westlake Park). In the event the Monorail Station is open for business or ready to open for business on the Scheduled Opening Date, and if the City shall have completed and fulfilled its other obligations and undertakings under the Contract to be completed and fulfilled by the Scheduled Opening Date, the City shall have the rights set forth in the Contract, and exercise of such rights shall be without limitation of any other rights and remedies of the City under the Contract resulting from Associates' failure to comply with its obligations and undertakings set forth therein.

Under the Contract the City is obligated to incur overtime and premium costs, as necessary, in order to complete, among other things, the Monorail Station, on or prior to the Scheduled Opening Date. If the City incurs such overtime and premium costs and causes the Monorail Station and certain other obligations of the City to be complete and open for business or ready to open for business by the Scheduled Opening Date but the Monorail Station Platform and retail portions of the Improvements are not open for business by the Scheduled Opening Date, Associates shall under certain circumstances as set forth in and subject to the provisions of the Contract, reimburse the City for a portion of such overtime and premium costs.

Section 4. Payment for Construction; Cost Savings.

Associates shall bear the cost of the Associates' Work respecting the Monorail Station Platform (not including costs incurred by the City respecting the City Work), until such time as the total cost of such construction (excluding design and engineering cost) is equal to \$2,051,000. The City shall bear the balance of all such construction cost, if any, respecting the Monorail Station Platform in excess of \$2,051,000.

The City shall bear the entire cost of construction respecting the Monorail Station, all other aspects of the Monorail System and its improvements to the Monorail Station Platform.

Upon receipt of a guaranteed maximum cost contract respecting base building construction of the Monorail Station Platform, Associates shall advise the City in writing no later than April 1,

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1987 as to the amount of the guaranteed maximum cost for the Associates' Work. Associates shall not enter into change orders increasing the guaranteed maximum cost of the Associates' Work by more than \$5,000, based on estimates provided by contractors and other parties performing work, unless the City consents to the same. During construction of the Monorail Station Platform, Associates shall pay for the cost thereof as invoiced, and on the Opening Date Associates shall advise the City of the estimated cost of construction with respect thereto. Within sixty (60) days following the Opening Date and completion of the Monorail System, Monorail Station and Monorail Station Platform, Associates shall certify to the City the actual cost respecting the Associates' Work and, within 30 days following such certification, the City shall advise Associates in writing whether it agrees that such cost, as certified, has been incurred in accordance with the Contract and this Agreement. If the City shall fail so to advise Associates of such agreement within such 30 day period, it shall be deemed conclusively that the City has agreed to the certification. Any bona fide dispute as to such certification shall be resolved by arbitration pursuant to Section 28 of this Agreement. Within 30 days following agreement as to such cost certification by Associates, (i) the City shall pay to Associates the entire amount by which such cost of Associates' Work, as certified and approved, exceeds \$2,051,000 or (ii) if such Associates' Work costs, as certified and approved, is less than \$2,051,000, Associates shall pay the City the entire difference between

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\$2,051,000 and the cost of such Associates' Work as certified and approved. Associates shall keep adequate books and records with respect to the cost of construction of the Monorail Station Platform and the City shall have the right to inspect such books and records at Associates' regular place of business, during Associates' regular business hours and upon reasonable prior notice to Associates, and provided that Associates shall not be required to maintain separate books and records regarding such costs.

Section 5. Temporary Monorail Station. The City shall be responsible, at its sole cost, for the demolition of any existing Monorail System tracks, equipment and improvements, including, without limitation, all piers, columns and supporting elements appurtenant to those portions of the existing Monorail System. The City may elect to leave the footings of the old monorail station in place, in which event Associates shall remove such footings and include the cost thereof in the scope of Associates' Work. The City shall further be responsible, at its sole cost, for the construction and demolition of a temporary monorail station to serve the Monorail System during construction of the Monorail Station and Monorail Station Platform.

Section 6. Quality of Construction; Mechanic's Liens. All construction respecting the Monorail System, Monorail Station and Monorail Station Platform shall be performed in a good and workmanlike manner, and Associates and the City will coordinate their construction respecting the Monorail Station and Monorail Station

Platform so as to facilitate their respective construction activities. The City recognizes and agrees that Section 20.46 of the Seattle Municipal Code does not apply to construction of the Monorail Station Platform. However, Associates agrees to seek to involve minorities and women in its construction of the Monorail Station Platform, as part of the Improvements (but not as a separate construction item) in the manner set forth in Section 42B of the Contract. The City and Associates hereby give notice that neither party hereto shall be responsible or liable for the work performed pursuant to this Agreement by or for the other party or for any materials furnished to or for the other party, nor shall either party hereto be subject to a lien upon its property for the cost of any labor, services or materials provided to the other party in the performance of the other party's obligations, or the exercise of its rights, under this Agreement. If, in connection with any work done or claimed to have been done by or on behalf of a party hereto, or in connection with any material supplied to such party, any mechanic's, laborer's or materialman's lien shall be filed against the property of the other party, such party, at its cost and expense, within thirty (30) days after notice of the filing of such lien, shall, upon the demand of the party against whose property the lien was filed, either (a) cause the same to be discharged of record, or (b) cause the same to be insured over to the satisfaction of the party demanding such discharge; provided that, in the event of a bona fide dispute as to the propriety of the lien and if the property of the lien party is not threatened

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with foreclosure to satisfy the lien or otherwise jeopardized by the lien, the responsible party shall not be required to discharge or insure over the lien so long as it provides the liened party with a bond (naming the liened party as an obligee) in form and amount reasonably satisfactory to the liened party (provided that the amount of such bond shall be at least equal to 125% of the amount claimed under the lien) and issued by a surety licensed to do business in the State of Washington and reasonably satisfactory to the liened party and sufficient in all respects to protect the liened party's interest in its property affected by the lien, and shall also defend, at its sole cost and expense, any action, suit or proceeding which may be brought for the enforcement of such lien, and shall pay any damages suffered or incurred therein by the liened party, and shall satisfy and discharge any judgments entered therein, and shall save the liened party harmless from any claims or damage therefrom.

Section 7. Alterations. Nothing contained in this Agreement, including, without limitation, the easements hereinafter granted, shall be construed to limit or restrict Associates' rights or ability to alter, modify, demolish, rebuild or reconstruct all or portions of the Improvements; provided and for so long as the same shall be consistent with the applicable provisions of this Agreement with respect to the Monorail Station Platform, access to the Monorail Station (following completion of such alteration, modification, demolition, rebuilding or reconstruction) pursuant to the easements hereinafter granted, and

otherwise be in accordance with any applicable provisions of the Contract. In the event Associates undertake to alter, modify, demolish, rebuild or reconstruct all or portions of the Improvements, the following conditions shall apply:

(a) Associates shall not close at the same time both the Interior Accessway and Exterior Accessway as described in Section 8 hereof.

(b) If either Accessway is closed for seven (7) days or less, (i) Associates shall notify the City in writing at least thirty (30) days in advance; (ii) the City shall have the right to reasonably disapprove the scheduled closure dates by a demonstration of a significant scheduling conflict and written notice of such disapproval shall be delivered to Associates within five (5) days of the receipt of the Associates' notice; (iii) in the event of such disapproval, the City shall provide Associates with alternate closure dates, which dates shall be within thirty (30) days of the scheduled closure dates; and (iv) Associates shall pay for and place signage at both terminals of the Monorail System notifying the ridership about the Accessway closure.

(c) If either Accessway is closed for more than seven (7) days, (i) Associates shall notify the City in writing at least ninety (90) days in advance; (ii) the City shall have the right to reasonably disapprove the scheduled closure dates by a demonstration of a significant scheduling conflict and written notice of such disapproval shall be delivered to Associates within five (5) days of the receipt of the Associates' notice; (iii) Associates

shall pay for and place signage at both terminals of the Monorail System notifying the ridership about the Accessway closure; and (iv) Associates shall compensate the City for any loss of income due to any ridership loss as a result of the Accessway closure. Loss of income for this purpose shall be determined by multiplying the average number of riders from the prior three years during the same period of time as the closure by the current average ticket rate. The City shall send Associates an invoice for the loss of income so calculated within thirty (30) days of re-opening the Accessway and Associates shall tender payment within thirty (30) days of receiving the invoice.

Section 8. Easements and Ramp Modifications.

(a) For the purpose of this Section the following will apply:

(i) A party granting an easement is called a "Grantor".

(ii) A party to whom an easement is granted is called a "Grantee".

(iii) The word "in" with respect to an easement granted "in" a particular parcel or property means, as the context may require, "in", "to", "on", "over", "through", "upon", "across" and "under", or any one or more of the foregoing.

(iv) The grant of an easement by a Grantor shall bind and burden its property to the extent of its interest therein, which for purposes of the granting of any easement

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under this Agreement shall be deemed to be the servient estate, and any such grant shall survive the total or partial destruction of the subject matter of the easement and extend for such period as is hereinafter provided and shall run with the land.

(v) The grant of an easement to a Grantee shall benefit the Grantee and its property (including, but not limited to, any leasehold, fee or real property interest of a Grantee), which property shall, for the purpose of this Agreement, be deemed to be a dominant estate, without payment of any fee or other charge therefor.

(vi) Unless provided otherwise, all easements granted hereunder are irrevocable and non-exclusive and may be used in common by the Associates and the City and their successors and assigns, and by the tenants, subtenants, concessionaires, invitees and licensees of Associates, and by the City's invitees, employees, and contractors retained to repair the Monorail System, Monorail Station Platform and Exterior Accessway, and passengers utilizing the Monorail System.

(vii) All easements granted hereunder shall exist by virtue of this Agreement and the Exhibits hereto, without the necessity of confirmation by any other document and shall be binding upon each Grantor, its successors and assigns, for the benefit of each Grantee, its successors and assigns. Upon the termination or release of any easement (in whole or

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in part) in respect of all or any part of the property burdened thereby, the same shall be deemed to have been terminated or released without the necessity of confirmation by any other document. However, upon the request of any Grantor or Grantee, each other Grantor and Grantee will execute and acknowledge an appropriate document memorializing the existence (including the location and any conditions) or the termination or release (in whole or in part), as the case may be, of any easement.

(b) Associates, as Grantor, hereby grants to the City, as Grantee, for the benefit of the Monorail Station, an easement in the Monorail Station Platform and those portions of the Improvements shown on Exhibit D as the Interior Accessway and Exterior Accessway (as the same may be actually constructed pursuant to this Agreement and the Contract) (collectively "Accessways") for the purpose of pedestrian access between the Improvements and Monorail Station, in accordance with the purpose for which such Accessways are designed and subject to the provisions of Section 9 below. In addition, the City shall have the right of access to the vault and electrical switches through the Improvements relating to the operation of the Monorail System, Monorail Station Platform and Exterior Accessway.

(c) The City shall not modify, redesign or replace the Monorail Station Platform ramps or install any other system of pedestrian access between the Improvements and the Monorail Station without the written consent of Associates.

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Section 9. Restrictions Respecting Easement Areas. The areas burdened by the easements granted pursuant to Section 8 above are hereinafter referred to as the "Easement Areas". Each of the parties hereto will take such action as may be reasonable under the circumstances to regulate the Easement Areas in accordance with those uses and purposes for which the Easement Areas are intended, and neither of the parties shall authorize the use of the same by anyone other than those persons to whom the easements are granted under Section 8. Notwithstanding the foregoing, nothing herein shall be construed to provide less rights of use than those which now or in the future shall be permitted under local, state and federal law.

(a) Unless required by law, no person shall be permitted to do any of the following in or about any part of the Easement Areas without the consent of both of the parties:

(i) (A) With respect to the Accessways, parade, rally, patrol, picket, demonstrate or engage in any conduct that might tend to interfere with or impede the use of the Accessways or Monorail Station Platform by persons entitled to use the same, create a disturbance, attract attention or harass, disparage or be detrimental to the interests of any of the retail or business establishments within the Improvements; and (B) with respect to the Monorail Station Platform, parade, rally, patrol, picket, demonstrate or engage in any conduct that would tend to obstruct, hinder or

impede the egress or ingress to the Monorail System or Accessway; or

(ii) Deface, damage or demolish any sign, light standard or fixtures, or other improvement on or within the Improvements or Monorail Station; or

(iii) Throw, discard or deposit any paper, glass or extraneous matter of any kind, except in designated receptacles, or create litter or hazards of any kind; or

(iv) Use any sound making device of any kind;

provided, that with respect to paragraphs (i) through (iv) above, neither of the parties hereto shall be deemed to be in default hereunder so long as such party uses reasonable effort to halt or prevent any such act or acts from taking place on property under its control. To the extent permitted by law, each of the parties shall have the right to deny access to or exclude from the Easement Areas any person engaged in the commission of any such act or acts or to restrain any such person from coming upon the Easement Areas. In so acting, such party shall not be deemed to be the agent of any other party, unless expressly authorized or directed in writing to do so by such other party.

(b) In addition to the foregoing restrictions, the parties' use of the Easement Areas shall be subject to and in accordance with the following:

(i) The City covenants and agrees that the Monorail System shall be in operation and open to public ridership and shall keep the Monorail Station open for pedestrian

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access between the Westlake Project and the Monorail Station during the hours that the retail portions of the Westlake Project are open or from 10:00 a.m. to 9:00 p.m. Monday through Saturday and 12:00 noon to 5:00 p.m. on Sunday, whichever is shorter.

(ii) The Monorail Station Platform and Exterior Accessway shall be open for pedestrian access one-half hour before and one-half hour after the regular operating hours of the Monorail System. Regular operating hours shall be provided in writing to the manager designated by Associates, but shall not exceed the time period from 6:00 a.m. to 1:00 a.m. each day. The initial regular operating hours are described in Exhibit E. Written notice of any change to the regular operating hours shall be delivered to the Associates' manager not less than thirty (30) days in advance of the effective date of any such change. Any change in the regular operating hours whereby the Monorail System would commence operations earlier than 6:00 a.m. or terminate operations later than 1:00 a.m. shall be subject to approval by Associates which shall not be unreasonably withheld. If the Monorail System is operating beyond its regular operating hours as a result of special events or circumstances, the Exterior Accessway shall be open one-half hour before and one-half hour after such extended hours, provided that the City shall give Associates 24-hour advance written notice of such extended hours. Any day in which the Monorail System is

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not in operation, Associates may close the Monorail Station Platform and Exterior Accessway to pedestrian access, but not for access by the City or its agents at any time.

(iii) Associates shall keep open the Interior Accessway and Queueing Area whenever the retail portions of the Westlake Project are open for business or at least from 10:00 a.m. to 7:00 p.m. Monday through Saturday and from 12:00 noon to 5:00 p.m. on Sunday. At all other times, Associates shall have the right to close access to the Interior Accessway and Queueing Area. If the Monorail System is in operation as a result of special events or circumstances beyond the regular operating hours, Associates shall keep open the Interior Accessway and Queueing Area upon written notice from the City not less than 24 hours in advance. In such event, the City shall pay Associates an hourly fee of \$50.00 per hour for each hour of extended operation by the City. Such fee shall be increased annually pursuant to an adjustment based on the Consumer Price Index, which adjustment is more fully described in Exhibit F. In addition, such fee may be increased by Associates, with the approval of the City, which approval shall not be unreasonably withheld, due to extra security costs as may be required by experience and over time. If the Interior Accessway and Queueing Area is open for such special events or circumstances, Associates may restrict access over any other portions of the Westlake Project.

(iv) In addition to and notwithstanding the foregoing, emergency access through the Easement Area shall be available on a 24-hour basis.

(v) Associates shall be entitled to install doors, security grilles and fire doors and/or fire protection devices on the Easement Areas in order to secure its property at times during which the Easement Areas are not open for pedestrian access and to protect its property against damage by fire.

(vi) In addition and notwithstanding anything contained in this Agreement to the contrary, Associates may temporarily deny access to and upon the Easement Area to the extent reasonably necessary for security purposes, fire or other emergencies.

(vii) The City shall be entitled to access to the Monorail Station Platform for construction and testing purposes at least five (5) months prior to the Scheduled Opening Date, provided Associates shall have completed its work respecting the Monorail Station Platform sufficient to allow such access safely and conveniently (and Associates shall use its reasonable efforts so to complete its work at least five (5) months prior to the Scheduled Opening Date). Associates shall give the City written notice at least sixty (60) days in advance of the commencement date of such five-month period. In the event Associates are unable to provide access on the designated commencement date, the time during

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such five-month period in which the City is to complete its obligations shall be extended for the same time period as the delay in providing access. During the construction of the Monorail Station and Monorail Station Platform, Associates shall, with assistance from the City, apply in a timely fashion for street use or other applicable permits in order to obtain temporary access to the sidewalk and street below the Monorail Station for the purpose of constructing piers, columns, vaults and other improvements in connection with the completion of the Monorail Station or Monorail Station Platform. Associates' application for such permits shall be considered and decided upon expeditiously by the City's Board of Public Works ("Board"), although nothing provided herein shall be construed to obligate the Board to issue such permits. If the Board does not issue such permits in a timely manner, Associates shall have the right to remove the work requiring such access from the scope of Associates' Work. Otherwise, neither party shall be entitled to access over those portions of the Easement Areas located on or above the property of the other until such time as work respecting the Easement Areas (including, in any event, the Monorail Station and Monorail Station Platform) shall have been completed pursuant to this Agreement and the retail portions of the Westlake Project are first open for business.

(viii) Associates shall not place any furniture, equipment or fixtures within or upon the Monorail Station

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Platform except as shown on the plans and specifications approved hereunder, or as provided under the Contract, or otherwise without the consent of the City. Associates shall have the right to merchandise the Monorail Station Platform and to grant concessions thereon; provided, however, that Associates shall remove such concessions upon the City's request pursuant to the same conditions described in Section 9(b)(ix). The City shall have the right to approve the location of any concessions by Associates on the Monorail Station Platform to the extent that the location of such concessions may adversely affect the use of the Platform as a public transportation terminal. The City shall have no right to grant any concessions on the Monorail Station Platform.

(ix) Associates will not place any permanent furniture, fixtures or equipment within that portion of the Accessways designated on Exhibit D as "Queueing Area" consisting of approximately 1,700 square feet, except to the extent shown on such plans and specifications or as otherwise agreed by the City. Associates may merchandise the Queueing Area pursuant to movable kiosks, pushcarts, displays and other movable merchandising fixtures and means, which shall not take more than 500 square feet of space in the Queueing Area, and Associates may install movable furniture, seating, fixtures and equipment within the Queueing Area, all without the consent of the City; provided, however, that upon not less than twenty-four (24) hours written notice from the City

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(which notice shall state that the City reasonably expects that the Queueing Area must be cleared in order to accommodate an anticipated high ridership volume and state the duration of time during which the City requires that the Queueing Area be cleared), Associates shall remove such movable furniture, equipment and the like from the Queueing Area for so long as the same shall be necessary to accommodate the City's request. At the end of the fifth (5th) year following the Opening Date, the City and Associates shall endeavor in good faith to agree as to whether the Queueing Area has been reasonably necessary for the efficient and orderly use of the Monorail Station. If the Queueing Area has not been so necessary on a consistent basis, the parties shall either remove the Queueing Area from the Easement Area or modify and/or reduce the size of the Queueing Area to accommodate the reasonably necessary needs of the Monorail Station (but the Queueing Area shall in no event be relocated or expanded without the consent of Associates, in its sole and absolute discretion), and the parties shall execute such release of easement or other document or instrument reasonably requested by either party to effectuate the same. Any bona fide dispute respecting whether the Queueing Area is reasonably necessary, on a consistent basis, for the efficient and orderly use of the Monorail Station shall be determined at the sole and absolute discretion of the City;

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provided that the City shall reasonably demonstrate to Associates the reasonable necessity of the Queueing Area.

(x) Provided that the Interior Accessway to the Monorail Station Platform shall include the main vertical accessway through the retail portions of the Westlake Project, Associates may, from time to time, reconfigure and/or relocate those portions of the Accessways (but not the Monorail Station Platform), in which event the easements created under this Agreement in and over the Accessways shall apply to and encumber the same, as reconfigured and/or relocated, but shall not apply to any portion of the Improvements no longer used as Accessways, and provided that Associates shall not reconfigure or relocate the Exterior Accessway or Queueing Area without the prior written consent of the City (which consent shall not be unreasonably withheld).

(xi) Each party reserves the right to close off those portions of the Easement Areas on its property for the installation of utilities or improvements or for the repair or restoration of its property; provided, however, that before closing off any part of the Easement Areas as provided above, such party shall give written notice to the other party of its intention to do so and shall coordinate its closing with the activities of the other party so as to minimize interference with the operation of the improvements or property of such other party pursuant to Section 7 hereof.

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Section 10. Associates' Use and Operating Covenant. Commencing on the date on which the retail portions of the Westlake Project are first open for business and continuing for so much of the Term of this Agreement as the City shall be complying with its obligations hereunder, and subject to discontinuances of use due to damage or destruction of all or portions of the Westlake Project or condemnation, and provided compliance is not rendered impossible by unavoidable delay, by action or inaction of the City or by persons or events over which Associates has no control, Associates shall keep the Interior Accessway in good, clean operating condition and repair, generally in accordance with the maintenance standards attached hereto as Exhibit G, and shall at its cost and expense make all needed repairs thereto and shall restore the same and all systems, facilities or equipment therein as often as the same shall be worn out, damaged or obsolete. Any dispute as to compliance with the provisions of this Section 10 shall be resolved by arbitration in accordance with the provisions of Section 28.

Section 11. Use and Operating Covenant of the City.

(a) Commencing on the date on which the retail portions of the Westlake Project are first open for business and continuing for so much of the Term of this Agreement as Associates shall be complying with its obligations hereunder, and subject to discontinuances of use due to change in use, damage or destruction of all or portions of the improvements of the City respecting the Monorail System (including, without limitation, the Monorail

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Station) or condemnation, and provided compliance is not rendered impossible by unavoidable delay by action or inaction of Associates or by persons or events over which it has no control, the City shall continuously manage and operate the Monorail System (including, without limitation, the Monorail Station and all fixtures, equipment and/or systems installed by the City upon or within the Monorail Stations Platform, Accessways and/or Improvements) as a first-class, clean, safe and efficient public transportation system with appurtenant systems and facilities. Without limiting the generality of the foregoing, commencing on the date on which the retail portions of the Westlake Project are first open for business, and continuing during the Term of this Agreement, subject to the provisions set forth above, the City shall keep the Monorail System, the Monorail Station, and all such fixtures, equipment and/or systems installed by the City upon or within the Monorail Station Platform, Accessways and/or Improvements in good, clean operating condition and repair, and shall at its cost and expense make all needed repairs thereto and shall restore the same and all systems, facilities or equipment therein as often as the same shall be worn out, damaged or obsolete.

(b) The City shall, at its sole cost, be responsible for all operation, cleaning, repair and maintenance of equipment and/or systems installed by the City, within or upon the Monorail Station Platform, Accessways, Ramps or Improvements.

(c) The City covenants and agrees to manage and operate the Monorail System with the Monorail Station in accordance with

this Section 11 hereof for not less than twenty (20) years after the Opening Date. Notwithstanding any other provision herein to the contrary, if the City defaults under this covenant, the damages to be paid to Associates shall be determined in accordance with Section 18(b). The City may sell, transfer, or convey any of its rights, title or interests in and to the Monorail System (including its current management rights) to any governmental entity without the Associates' consent, but shall not sell, transfer or convey any of its rights, title or interests in and to the Monorail System (including its current management rights) to any non-governmental entity without the written consent of Associates, which shall not be unreasonably withheld.

(d) The City shall not extend, expand or substantially alter the Monorail System in any manner which would increase on a consistent basis above the peak base ridership volume passenger use of the Monorail Platform and/or Accessways without the prior written consent of Associates. For purposes of this provision, the peak base ridership volume is 6,000 passengers per hour. Any dispute as to compliance with the provisions of this Section 11 shall be resolved by arbitration in accordance with the provisions of Section 28.

Section 12. Maintenance, Security and Utilities.

(a) The City shall be responsible at all times for providing security services to and securing the Monorail Station Platform, Ramps and Exterior Accessway. Associates shall be responsible at all times for providing security services to and

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securing the Interior Accessway. Associates shall have the right to protest the insufficiency of security for the Platform and Exterior Accessways and the City shall have the same right with respect to the Interior Accessway. Upon the occurrence of such protest, the City or Associates, in cooperation with the other party, shall promptly and reasonably endeavor to develop and implement a revised schedule and standard of security services as may be reasonably necessary under the circumstances.

(b) The City shall be responsible before and after the regular operating hours of the retail portions of the Westlake Project for providing overnight and routine cleaning and maintenance services and all other maintenance services not otherwise the responsibility of Associates for the Monorail Station Platform, Ramps and Exterior Accessway. Such routine cleaning and maintenance services shall be in accordance with the schedule and standards for such services described in Exhibit H. The regular operating hours of the retail portion of the Westlake Project for the purposes of this Section shall be at a minimum 10:00 a.m. to 7:00 p.m. Monday through Saturday, and 12:00 noon to 5:00 p.m. on Sunday. During the regular operating hours of the retail portions of the Westlake Project, Associates shall be responsible for providing routine spot cleaning and maintenance services for the Monorail Station Platform and Exterior Accessway in accordance with the schedule and standards for such services described in Exhibit I. If either party fails to provide their respective required cleaning and maintenance services described in this

Section for the Monorail Station Platform and Exterior Accessway, the other party shall so notify the responsible party for such failure. If after 24 hours, the responsible party has not corrected the default, the other party may provide such required maintenance services at the expense of the defaulting responsible party until such time as the responsible party provides the required level of service. Any dispute arising in connection with this Section 12 shall be resolved by arbitration in accordance with the provisions of Section 28.

(c) The City shall be responsible for all capital improvements, replacements and major maintenance on the Monorail Station Platform, Ramps and Exterior Accessway. Prior to the commencement of any such capital improvement, replacement or maintenance, the City shall first obtain the written approval of Associates, which shall not be unreasonably withheld. All replacements of such capital improvements, equipment or fixtures shall be, at least, of equivalent quality as the original. The City shall maintain the Monorail Station Platform and Exterior Accessway, including without limitation, any mechanical systems thereon, in a first-class and sound operating condition, except the routine repair and maintenance of the elevator in the Exterior Accessway. The City shall provide Associates in advance with a copy of the annual capital budget which covers the Monorail System and Monorail Station. Any dispute under this Section shall be resolved by arbitration as provided in Section 28.

(d) The City shall pay all utility charges in connection with the Monorail Station Platform, Ramps and Exterior Accessway. Associates shall pay all utility charges in connection with the Interior Accessway.

Section 13. Payment. In order to reimburse in part Associates' costs in providing cleaning and maintenance services, in keeping open the Interior Accessway and in providing other non-routine services more fully described in Exhibit I, for the Monorail Station Platform and Exterior Accessway, the City shall pay Associates \$2,583.33 per month. Such amount shall be increased annually pursuant to an adjustment based on the Consumer Price Index, which adjustment is more fully described in Exhibit F. Such amount may, also, be increased, with the approval of the City, in accordance with insurance premium increases directly related to claims experience on the Monorail Station Platform, Ramps and Exterior Accessway.

Section 14. Liability Insurance.

(a) Upon the execution of this Agreement, Associates shall obtain and file with the City evidence of its policy of comprehensive general liability insurance. Such policy shall specifically name the City as an additional insured thereunder. This insurance shall be maintained by Associates during the term of this Agreement.

(b) The City is not insured by any independent insurance carrier and is self-insured at this time. Should the City, at its sole discretion, obtain any applicable independent insur-

ance coverage on the Monorail Station and Platform, then the City agrees that it shall notify Associates immediately in writing and shall specifically name Associates as an additional insured thereunder. The parties recognize that under current law, including Article VIII, Section 6 of the Constitution of the State of Washington and RCW 39.36.020, 6.04.140 and 6.04.150, there is a limit upon the amount of public indebtedness which may be incurred by the City, upon which Associates have relied, as a material part of this Agreement, and agreed to the City's self-insurance as it impacts the Monorail Station and Platform. Should there be a material change to the current law in this respect during the period of time in which the City remains self-insured, then upon reasonable notice from either party, the parties shall endeavor in good faith to renegotiate this section of the Agreement.

Section 15. General Contractor's Insurance. Each party shall require that their respective general contractors, performing any of the construction work contemplated under this Agreement, name Associates and the City as additional insureds on the general contractors' policies of comprehensive general liability insurance. Each general contractor shall, at its own expense, obtain and shall file with Associates and the City appropriate evidence in the form of a Certificate of Insurance of a policy of comprehensive general liability insurance (including contractual and automobile coverages). Such Certificates are subject to approval by Associates and the City as to insurer, form and coverage. Such policies shall provide minimum limits of

\$1,000,000 combined single limit per occurrence and annual aggregate with no deductible amounts. Associates and the City shall be given thirty (30) days prior written notice of any material change, cancellation, expiration or non-renewal of each such policy.

Section 16. Indemnity. To the extent permitted by law, the City shall indemnify, save harmless, and defend Associates from all claims and liability due either to the negligent acts, errors or omissions of the City, its agents and employees, or from anyone arising on or within the area of the Monorail System, Monorail Station Platform, Ramps or Exterior Accessway, except to the extent such claims and liability relate to cleaning and maintenance services provided by Associates pursuant to Section 12 in such areas. In the same manner, Associates shall indemnify, save harmless and defend the City from all claims and liability due either to the negligent acts, errors or omissions of Associates, its tenants, subtenants, agents and employees, or from anyone arising on or within the Interior Accessway. Each party shall be responsible proportionately for their own negligent acts, errors or omissions and claims and liability arising therefrom as governed by the laws of the State of Washington. Each party shall bear its own defense costs, including attorneys' fees, statutory and other costs for defending a claim.

Section 17. Damage and Destruction. In the event of the destruction of or damage to any portion of the property of either party hereto located upon or adjacent to Block 1 (the Improvements

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in the case of Associates and the Monorail Station in the case of the City), and if such party elects to rebuild, restore or repair the same (it being understood that, pursuant to the Contract Associates may be obligated to rebuild the Improvements or portions thereof), such party shall promptly rebuild, restore and repair the same, or cause such rebuilding, restoration and repair, in a good and workmanlike manner. Any such rebuilding, restoration and repair shall include:

(a) In the case of damage to or destruction of any portion of the property of Associates, and at the option of the City, the rebuilding, restoration and repair (as necessary) of the Monorail Station Platform and such portions of the Easement Areas as are located upon or above the Westlake Property to as good a condition, to the same general appearance, and on the same level or levels as existed prior to such damage or destruction; and

(b) In the case of damage to or destruction of the Monorail System, and at the option of Associates, the rebuilding, restoration and repair (as necessary) of the Monorail System and Monorail Station to the same general quality, performance and operation standards, and appearance and in the same level or levels as existed prior to such damage or destruction.

Section 18. Election Not to Rebuild.

(a) Following completion of construction of the Westlake Project and continuing until the Termination Date, provided the Monorail System and Monorail Station are in operation in accordance with this Agreement and the City is otherwise in compliance

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with its obligations hereunder, and subject to the rights, if any, of the City under the Contract, any Mortgagees or other third parties, Associates may, at its sole option, within a reasonable period of time, elect not to rebuild or restore the Improvements (including, but not limited to the Monorail Station Platform), in which event the following shall occur:

(i) Associates shall grant the City the right to build, at the City's sole expense, a temporary monorail station platform with an accessway to the sidewalk on Associates' property in substantially the same space occupied by the Monorail Station Platform and Exterior Accessway. The City shall promptly remove, at the City's sole expense, such temporary platform and accessway upon the request of Associates when Associates commence construction on the Property.

(ii) The access easement granted to the City in Section 8 shall continue in accordance with this Agreement.

(iii) Associates and the City shall negotiate in good faith the terms of a new operating agreement for the Monorail System, if Associates elect to re-develop the Property.

(iv) The City shall waive all damages and claims against Associates in connection with any interruption of Monorail System service.

(v) Associates shall clear away any ruins resulting from damage or destruction.

(b) Following completion of construction of the Westlake Project and continuing until the termination date,

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provided the Westlake Project is in operation in accordance with this Agreement and Associates are otherwise in compliance with its obligations hereunder, the City may, at its sole discretion, within a reasonable period of time, elect not to rebuild or restore the Monorail Station or System, in which event the City shall undertake the following:

(i) During the initial twenty (20) years of this Agreement, the City shall pay Associates an amount equal to \$2,051,000 less \$102,550 for every year after the first year of this Agreement until the year the Monorail System suffers such damage or destruction.

(ii) The City shall remove all fixtures, systems and equipment relating to the operation of the Monorail System, Monorail Station, Ramps, and Monorail Station Platform from the Monorail Station Platform, Exterior Accessway and Interior Accessway.

(c) If any portion of the Improvements, including the Easement Areas, and the Monorail System or Station are damaged or destroyed at the same time, either party may elect not to rebuild or restore, respectively, the Improvements or the Monorail System or Station. Each party shall waive any damages or claims against the other party in connection with the damage or destruction, at the same time, of the Improvements and Monorail System or Station. If the City elects to rebuild or restore the Monorail Station and Associates does not elect to rebuild or restore the Improvements, then Associates shall perform the undertakings

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described in Section 18(a). If the Associates elect to rebuild or restore the Improvements and the City does not elect to rebuild or restore the Monorail Station, then the City shall perform the undertakings described in Section 18(b).

Section 19. Mortgages. At any time and from time to time during the Term of this Agreement, Associates may assign or encumber its interest in this Agreement by way of a Mortgage or Mortgages containing such terms and provisions as Associates shall, in its sole discretion, deem fit and proper (but subject to the provisions, as applicable, of the Contract), and no Mortgagee of Associates shall be bound by the provisions of this Agreement as a result of any such Mortgage. Notwithstanding the foregoing, following completion of construction of the Improvements should any such Mortgagee of Associates otherwise succeed to the interest of Associates in this Agreement pursuant to foreclosure, assignment or deed in lieu of foreclosure, such Mortgagee, and any party who acquires Associates' interest in this Agreement through such Mortgagee shall be bound by the provisions of this Agreement; provided, however, that a Mortgagee of Associates which succeeds to the interest of Associates in this Agreement and the Improvements pursuant to foreclosure, assignment or deed in lieu of foreclosure prior to completion of the Improvements shall only be required to complete construction of the Improvements (including, without limitation, the Monorail Station Platform and Easement Areas located on the Westlake Property) to the extent required under the Contract.

As used herein the term "Mortgage" means any one or more mortgages, deeds of trust, deeds to secure debt, loan deeds, trust indentures, owner's interest in a sale-leaseback, lessor's interest in a lease-sublease back, security agreements or any similar security or title retention device, including without limitation any leasehold mortgage, which shall, from time to time, create a lien upon the estate of any Associates in property and which shall be security for one or more notes, bonds or other evidences of indebtedness issued by Associates. The term "Mortgagee" means the holder of a Mortgage or the lender in whose favor the Mortgage was created, together with its successor, assignee or designee selected by the Mortgagee to take title to the property encumbered by the Mortgage upon foreclosure or assignment or deed in lieu of foreclosure.

Section 20. Release Upon Transfer. If at any time, either party shall sell, assign, transfer or convey the entirety of its interest in the property which is the subject of this Agreement, other than by the execution of a Mortgage, such party shall be relieved of all further liability hereunder accruing from and after the date of transfer. Such party shall, however, as a condition of such transfer, cause the transferee expressly to assume and be bound by all the terms, covenants and conditions in this Agreement contained and to be performed on the part of the transferring party.

Section 21. Rights of Self-Help.

(a) If any party (the "Defaulting Party") fails to perform any of the provisions, covenants or conditions of this Agreement on its part to be performed (including, without limitation, the making of any payment which the Defaulting Party has agreed herein to make) at the time and in the manner herein provided for the performance thereof, or if any provision, covenant or condition in this Agreement requires the diligent pursuit of a conduct or a course of work and if the Defaulting Party shall fail to pursue it diligently, then, in addition to any other remedies at law or in equity or as otherwise provided in this Agreement, the other Party (the "Non-Defaulting Party") may, upon 24 hour notice with respect to physical security devices on the Monorail Station Platform or Exterior Accessway or securing the access between the Monorail Station Platform and the Interior Accessway, or to cleaning and maintenance services described in Section 12, or upon reasonable notice not to exceed sixty (60) days with respect to matters involving a material visual impact on equipment, fixtures or other improvements installed by Associates on the Monorail Station Platform or Exterior Accessway, or involving public safety or unsafe conditions, or upon such other notice as may be specifically provided herein, cure or prosecute the curing of such default and all reasonable expense incurred in connection therewith, including legal fees, together with interest thereon at the Default Rate shall promptly be paid by the Defaulting Party to the Non-Defaulting Party effecting such cure.

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Neither party shall have the right to enter upon the property of the other party, except the Easement Areas, or to operate or cause the operation of the property of such other party in order to undertake any such cure.

(b) In addition, with respect to the events described herein, Associates may deny the City access to the property of Associates, including the Easement Areas, after Associates have notified the City in writing not less than thirty (30) days in advance. Such denial of access shall continue during the period of any default by the City in its obligations hereunder until such time as the default is cured (including such time as any amounts owed to Associates by the City shall have been paid in full, with interest thereon at the Default Rate from the time the amounts became due) and shall only occur upon the happening of the following events:

(i) Failure by the City to satisfy promptly any judgment rendered against the City or against Associates, if Associates is protected by the City's indemnity in Section 16;

(ii) Failure by the City to comply promptly with any arbitral award or decision rendered pursuant to Section 28; or

(iii) Failure by the City to pay promptly the obligations described in Section 13 and 9(b)(iii), in which event, the denial of access is limited to the Interior Accessway.

(c) The term "Default Rate" means the annual rate of interest equal to the lesser of (i) the rate of interest announced from time to time by The Chase Manhattan Bank (National Associa-

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tion) (or some other bank agreed upon by the Parties) for short term loans to large businesses having the highest credit standing or (ii) the highest rate of interest allowed by law.

Section 22. Duration of Rights. The rights given by either party to the other to act as a Non-Defaulting Party under Section 21 shall endure until the Termination Date, provided that if and to the extent that any right or obligation of any party under this Agreement endures beyond such Termination Date, the rights provided in this Agreement shall likewise endure. Nothing in this Agreement shall act to terminate or limit any right of any Party to receive payment of any amount accrued at or before the Termination Date until it has been paid in full.

Section 23. No Termination and Re-negotiation Rights.

(a) The parties expressly agree that any provision of law or equity to the contrary notwithstanding, in the event of any default hereunder, such default shall not give rise to a right to terminate this Agreement, and the parties expressly understand and agree that this Agreement shall continue in effect through its Term, notwithstanding any default by any party.

(b) On the twentieth (20th) and fortieth (40th) anniversary of the date of this Agreement, either party may request the other party to re-negotiate the financial terms of this Agreement in order to reflect any changed circumstances. Each party shall negotiate in good faith and shall reasonably take into account any changed circumstances.

Section 24. Remedies Not Exclusive. The remedies provided for in this Agreement are not the sole remedies of a party and shall not be construed to be, by way of limitation, the only remedies available to the parties, but in addition either party shall be entitled to all remedies available in law or equity for breach by the other party.

Section 25. Rights of Mortgagees. The City agrees to accept performance and compliance by any Associates' Mortgagee of and with any term, covenant, agreement, provision or limitation on the part of Associates to be kept, observed or performed by the Associates under this Agreement. Without limiting the generality of the foregoing, in the event Associates shall be a Defaulting Party under this Agreement, the City shall not exercise its rights or remedies provided in Section 21 unless it shall first give to each of the Associates' Mortgagees whose name and address shall have been provided to the City pursuant to Section 29 notice of the event or events giving rise to Associates' default hereunder and stating the City's intention to exercise its remedies hereunder on a date specified in such notice. Notwithstanding such notice, the City shall not exercise its remedies hereunder if (i) such default by the Associates can be cured by the payment of a fixed monetary amount and within thirty (30) days after the date on which such notice is given, such Mortgagee shall make such payment or (ii) such default can be cured with the exercise of reasonable diligence by such Mortgagee, and such Mortgagee, within sixty (60) days after the date such notice is given, commences

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such proceedings (including, without limitation, the filing of a petition for the appointment of a receiver) as it may deem necessary to succeed to Associates interest under this Agreement and thereafter diligently pursues the curing of such default. Upon request, the City will enter into an agreement with any Mortgagee of Associates granting to the Mortgagee the rights set forth in this Section 25. This Agreement shall not be modified, amended, surrendered, cancelled or wholly terminated by Associates, nor shall any waiver of Associates' rights hereunder be effective, without the written consent of such Associates' Mortgagees whose name and address shall have been furnished to the City pursuant to Section 29.

Section 26. Termination Date.

(a) This Agreement shall remain in full force and effect and binding upon each party hereto and its property to the extent herein provided until the occurrence of the Termination Date. On the date of the first to occur of the following events (the "Termination Date"), this Agreement shall terminate in its entirety:

(i) The fiftieth (50th) anniversary of the date of this Agreement, except as provided in Section 26(c);

(ii) Upon the condemnation of all or substantially all of the Improvements (provided that such termination shall not be effective until such time as title to the condemned property vests in the condemning authority and the City (if not the condemning authority) shall be entitled to claim compensation from

the condemning authority on account of its lost easements or easement rights hereunder) or the destruction of all or substantially all of the Improvements not followed by commencement of restoration within one (1) year;

(iii) Upon the unanimous consent of the City, Associates and Associates' Mortgagees;

(iv) At the option of Associates and following sixty (60) days written notice to the City, at such time as operation of the Monorail System shall be discontinued, for reasons other than those necessary for the repair and maintenance of the Monorail System, for a continuous period in excess of sixty (60) days or for any non-consecutive sixty (60) days total in any calendar year; or

(v) At the option of the City and following sixty (60) days written notice to the Associates, at such time as operation of the retail portions of the Westlake Project shall be discontinued, for reasons other than those necessary for the repair, maintenance or renovation of the Improvements, for a continuous period in excess of twenty-four (24) months.

(b) On the Termination Date each party shall be released from each covenant, provision and condition to be performed by it under this Agreement (including, without limitation, those respecting easements), which is not by its terms, to extend beyond or survive the Termination Date (except that the parties shall not be released from any liability incurred prior to the Termination Date). Upon the request of a party, both parties

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shall sign and exchange an instrument in recordable form evidencing the termination of this Agreement.

(c) Provided the Monorail System and Monorail Station are in operation in accordance with this Agreement and the City is otherwise in compliance with its obligations hereunder, on the fiftieth (50th) anniversary of the date of this Agreement, either party may request the other party to re-negotiate the terms of this Agreement. Each party shall negotiate in good faith. If the parties are unable to reach an agreement on the new terms of the Agreement within two (2) years of the fiftieth (50th) anniversary date, such disputed terms shall be submitted to arbitration as provided in Section 28. In any event, the City shall retain, at its sole and absolute discretion, the right to an access easement on the Property to operate the Monorail Station; provided that, any calculation of any arbitral award or decision shall disregard the City's right to retain such an access easement. During the time the parties continue to negotiate in good faith or the arbitration process is in operation, the terms of this Agreement as of the fiftieth (50th) anniversary date shall continue with full force and effect.

Section 27. Compliance with Laws. At all times during the Term, the parties shall comply with all laws then in effect respecting the performance of their respective obligations and the exercise of the respective rights hereunder.

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Section 28. Arbitration.

(a) If a dispute shall arise between the parties, and if, pursuant to any express provision of this Agreement, such dispute is to be resolved by arbitration, then any such dispute shall be resolved by arbitration. Except to the extent expressly provided otherwise herein, any such arbitration shall be in accordance with the commercial arbitration rules of the American Arbitration Association then obtaining and shall commence within thirty days of the date arbitration was invoked.

(b) The arbitrators shall be sworn faithfully and fairly to determine the question(s) at issue, and shall afford each party a hearing and the right to submit evidence, with the privilege of cross-examination on the question(s) at issue, and shall, with all possible speed, make their determination in writing, and shall give the parties notice of such determination. Any Mortgagee of Associates shall be entitled to participate fully in such hearing. All fees and costs of any such arbitration shall be paid as provided in the commercial arbitration rules of the American Arbitration Association or as determined by the arbitrators. Each arbitrator shall be independent of any affiliation or interest with either of the parties and shall be experienced in the development and operation of high quality, mixed-use real estate projects and public transportation systems. In any proceeding conducted pursuant to this Section, the award of the arbitrators shall be final and binding and enforceable in any court of competent jurisdiction.

(c) Except the arbitration described in Section 26(c), if either party reasonably and in good faith believes that an arbitral award or decision of a dispute would involve damages in excess of \$25,000, then such dispute shall not be subject to arbitration. Once the parties submit a dispute to arbitration, the arbitral award or decision shall be final, binding and enforceable, regardless of the amount of any damages.

Section 29. Notices. Every notice, demand, consent, approval or other communication which either party is required or desires to give or make or communicate upon or to the other party shall be in writing and shall be sent by mailing the same by registered mail or certified mail, postage prepaid, return receipt requested, as follows:

IF TO THE CITY: Director of Seattle Center  
Seattle Center  
305 Harrison Street  
Seattle, Washington 98109

or to such other address or addresses as the City shall from time to time and at any time designate by notice to Association.

IF TO ASSOCIATES: Westlake Center Associates  
Limited Partnership  
Associates-Seattle, Inc.,  
General Partner  
c/o The Rouse Company  
10275 Little Patuxent Parkway  
Columbia, Maryland 21044  
Attention: General Counsel

or to such other address or addresses as Associates shall from time to time and at any time designate by notice to the City.

Every notice, demand, request, or other communication sent in the manner aforesaid shall be deemed to have been given, made or

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communicated, as the case may be, and shall be effective on the second business day after the same has been deposited, registered or certified, properly addressed as aforesaid, postage prepaid, in the United States mail, except that any notice, demand, request, or other communication to a party (but not to any Mortgagee) may be personally delivered, and in such event shall be deemed to have been given on the date the same shall have been personally delivered to the officer or representative of the Party (as identified above) to whom such notice, demand, request or other communication is addressed. Each party shall designate an officer or representative to receive such personal notice.

Either party may require, at any time, that additional copies of any notice, be sent to such person(s), not, as to each notice, in excess of three (3) copies at any one time, as shall from time to time be designated in any notice from such party as to such requirement.

Section 30. Section Headings. The section headings in this Agreement are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

Section 31. Successors. Subject to the other provisions of this Agreement, all of the terms, covenants, obligations and conditions of this Agreement shall inure to the benefit of and shall bind as the case may be, the parties hereto, and their

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respective heirs, executors, administrators, legal representatives, successors and assigns.

Section 32. Real Estate Commissions. Each of the parties represents and warrants unto the other that there are no commissions, charges or other compensation due any broker, agent or finder with respect to this Agreement or the negotiations thereof, and each of the parties covenants and agrees with the other that if either party hereto utilizes an agent, broker, or finder, the party so using an agent, broker or finder or incurring such commissions, charges, fees or similar expenses will pay, hold harmless and indemnify the other party from and against all claims, costs, expenses or liability (including, without limitation, the cost of counsel fees in connection therewith) for any such compensation, commissions, charges or other compensation claimed by any such broker, agent or finder.

Section 33. Estoppel Certificates. Each party agrees that at any time and from time to time at reasonable intervals, within thirty (30) days after written request by the other party, such party will execute, acknowledge and deliver to the requesting party or to any prospective Mortgagee of Associates, assignee or tenant or subtenant, a certificate stating (i) that the Agreement is unmodified and in force and effect (or if there have been modifications, that this Agreement is in force and effect as modified, and identifying the modification agreements, or if the Agreement is not in force and effect the certificate shall so state; (ii) whether or not there is any existing default by either

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party under the Agreement with respect to which a notice of default has been served, and if there is any such default, specifying the nature and extent thereof; and (iii) whether or not, to the best knowledge of the certifying party, there are any setoffs, defenses or counterclaims against enforcement of the obligations of the certifying party hereunder.

Section 34. No Waiver. No failure of either party hereto to exercise any power given it hereunder or to insist upon strict compliance by the other party with its obligations hereunder, and no custom or practice of the parties at variance with the terms hereof shall constitute a waiver of either party's right to demand exact compliance with the terms hereof.

Section 35. Partial Invalidity. In any term, covenant, or condition of this Agreement or the application thereof to any person, party or circumstances shall, to any extent, be illegal, invalid, or unenforceable because of present or future laws or any rule or regulation of any governmental body or entity or becomes unenforceable because of judicial construction, the remaining terms, covenants and conditions of this Agreement, or the application of such term, covenant or condition to persons, parties or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term, covenant, or condition of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

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Section 36. Rights Cumulative. All rights, powers and privileges conferred herein upon the parties shall be cumulative but not restrictive to those given by law.

Section 37. Waivers and Consents. One or more waivers of any covenant, term or condition of this Agreement by either party shall not be construed as a waiver of subsequent breach of the same covenant, term or condition. The consent or approval by either party to or of any act by the other party requiring such consent or approval shall not be deemed to waiver or render unnecessary consent to or approval of any subsequent similar act. The Director of the Seattle Department of Community Development is authorized to act for and on behalf of the City in connection with this Agreement and in determining Associates' compliance with its obligations hereunder, and to extend the time for the performance of any of Associates' obligations under this Agreement, and to grant any consents, waivers or approvals on behalf of the City hereunder, except where action by another party is required by law or this Agreement.

Section 38. Entire Agreement. This Agreement and all the Exhibits attached hereto contains the entire agreement of the parties with respect to the subject matter hereof, and no representations or agreements, oral or otherwise, between the Parties not embodied herein, attached hereto or hereinabove referenced shall be of any force and effect. Any additions or amendments to this Agreement subsequent hereto shall be of no force and effect unless in writing and signed by the parties hereto.

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Section 39. Transfer; Binding Nature. Except as provided in Section 19 (Mortgages), any sale, transfer or conveyance of any property subject to this Agreement or any part thereof or interest therein shall be subject to this Agreement, and it shall be deemed construed without further agreement that the purchaser or grantee at any such sale, transfer or conveyance has assumed and agreed to carry out any and all obligations of the transferor in this Agreement so long as such purchaser or grantee shall be the owner of the interest so transferred. As a condition of any such sale, transfer or conveyance, the transferee thereunder shall execute such instruments as the other party may reasonably require confirming the foregoing, and each party represents and covenants that it will not make any such sale, transfer or conveyance except in accordance with the provisions of this Section. In addition to and without limiting the generality of the foregoing, the City shall not, without the prior written consent by Associates, sell, transfer or convey the Monorail System or Monorail Station or its interest therein, or any part thereof, to any party which is not a governmental entity or agency.

Section 40. No Partnership. Nothing herein and no subsequent acts of any of the parties shall be deemed or construed by the parties hereto, nor by any third party, as creating or authorizing the creation of the relationship of principal and agent or of partnership or joint venture between the parties, or any of them.

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Section 41. Expense of Obligations. Where this Agreement imposes obligations or responsibilities upon either party hereto, such obligations and responsibilities shall be performed at the expense of such party responsible therefore except where otherwise specifically provided.

Section 42. Unavoidable Delay. Except as otherwise expressly provided, each party hereto shall be excused from performing any of its obligations or undertakings provided in this Agreement (except any of its obligations to pay any sums of money under the applicable provisions hereof) for so long as the performance of such obligation is prevented or delayed by any cause which is beyond the reasonable control of such party, including but not limited to such of the following as may be beyond the reasonable control of such party: Act of God; fire; earthquake; flood; explosion; action of the elements; war; invasion; insurrection; riot; mob violence; sabotage; malicious mischief; inability to procure or general shortage or rationing or regulation of labor, equipment, facilities, sources of energy (including, without limitation, electricity, gas, gasoline or steam), materials or supplies in the open market; failure of transportation; strikes; lockouts; action of labor unions; condemnation; requisition; order of government or civil or military or naval authorities; litigation involving a party or others relating to zoning, subdivision, or other governmental action or inaction; or any other cause, whether similar or dissimilar to the foregoing, not reasonably within the control of such party; provided, however, that neither

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party shall be entitled to relief under this Section by reason of any event unless such party shall have given the other party notice of such event and the nature of such event within a reasonable time after the occurrence of such event, and unless such party uses reasonable prudence and diligence (without unreasonable expense) to avoid or mitigate the delay caused by such event.

Section 43. Recordation. This Agreement or a memorandum hereof shall be recorded among the land records of the City of Seattle. All costs and expenses of such recording shall be shared equally by the parties.

Section 44. Number and Gender. Whenever the singular number is used in this Agreement and when required by the context, the same shall include the plural, and vice versa, and the masculine gender shall include the feminine and neuter genders, and the word "person" shall include corporation, firm or association.

Section 45. No Third Party Rights. Nothing in this Agreement shall be construed to permit anyone other than the parties hereto and Associates' Mortgagees, and their successors and assigns to rely upon the covenants and agreements herein contained nor to give any such third party a cause of action (as a third-party beneficiary or otherwise) on account of any nonperformance hereunder.

Section 46. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Washington and venue shall lie with the appropriate court in King County.

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IN WITNESS WHEREOF, the parties have caused these presents to be executed, acknowledged and delivered in form and manner proper and sufficient in law, all as of the day and year first above written.

ATTEST:

THE CITY OF SEATTLE

\_\_\_\_\_

By: \_\_\_\_\_  
Director, Seattle Center

\_\_\_\_\_

By: \_\_\_\_\_  
Director, Department  
of Community Development

WESTLAKE CENTER ASSOCIATES  
LIMITED PARTNERSHIP

ATTEST:

By: Rouse-Seattle, Inc.,  
General Partner

\_\_\_\_\_

By: \_\_\_\_\_  
Its \_\_\_\_\_

By: WESTLAKE 7 BUILDING PARTNERS  
LIMITED PARTNERSHIP,  
General Partner

ATTEST:

By: Koehler, McFadyen & Company,  
General Partner

\_\_\_\_\_

By: \_\_\_\_\_  
Its \_\_\_\_\_

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STATE OF WASHINGTON )  
 ) ss  
COUNTY OF KING )

On this day personally appeared before me \_\_\_\_\_  
and \_\_\_\_\_, to me  
known to be the \_\_\_\_\_ and \_\_\_\_\_  
respectively of the municipal corporation that executed the within  
and foregoing instrument and acknowledged said instrument to be  
the free and voluntary act and deed of said municipal corporation  
for the uses and purposes therein mentioned and on oath stated  
that they are authorized to execute said instrument and that the  
seal affixed is the corporate seal of said municipal corporation.

WITNESS my hand and seal this \_\_\_\_\_ day of \_\_\_\_\_,  
1986.

\_\_\_\_\_  
NOTARY PUBLIC in and for the  
State of Washington, residing  
at \_\_\_\_\_  
Commission expires \_\_\_\_\_

STATE OF )  
 ) ss  
COUNTY OF )

I hereby certify that on this \_\_\_ day of \_\_\_\_\_, 1986,  
personally appeared before me \_\_\_\_\_ and  
\_\_\_\_\_, to me known to be the Vice President  
and \_\_\_\_\_ respectively of Rouse-Seattle, Inc., a  
corporation executing the within and foregoing instrument and  
acknowledged said instrument to be the free and voluntary act and  
deed of said corporation as general partner of Westlake Center  
Associates Limited Partnership for the uses and purposes therein  
mentioned and on oath stated that they are authorized to execute  
said instrument.

WITNESS my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_,  
1986.

\_\_\_\_\_  
NOTARY PUBLIC in and for the  
State of \_\_\_\_\_, residing  
at \_\_\_\_\_  
Commission expires \_\_\_\_\_

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Exhibit A  
Property Interest

Fee Simple Estates in:

Lot 1, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington;

EXCEPT the Westerly 12 feet of said lot condemned by the City of Seattle in King County Superior Court Cause No. 52280, for the widening of Fourth Avenue, as provided by Ordinance 13778 of said City; and

EXCEPT the Southeasterly 7 feet of said lot condemned by the City of Seattle, in King County Superior Court Cause No. 57057 for the widening of Pine Street as provided by Ordinance 14500 of said City; and

EXCEPT the portion of said lot condemned by the City of Seattle, in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance No. 7733 of said City.

Lot 3, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to the plat recorded in Volume 1 of Plats, page 103, in King County, Washington;

EXCEPT the Westerly 12 feet of said Lot condemned by the City of Seattle in King County Superior Court Cause No. 52280 for the widening of Fourth Avenue, as provided by Ordinance 137376 of said City;

All those portions of Lots 8, 9, 10 and 11, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, Page 103, in King County, Washington; lying Westerly of the West line of Westlake Avenue, as condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance 7733 of said City.

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Those portions of Lots 10, 11 and 12, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 1203, in King County, Washington, lying easterly of the east line of Westlake Avenue as condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance 7733 of said City; EXCEPT the southeasterly 7 feet of said Lot 12 condemned by the City of Seattle in King County Superior Court Cause No. 57057 for the widening of Pine Street as provided by Ordinance 14500 of said City.

Also subject to all of the terms and conditions of this Agreement, the City agrees to sell and assign to Purchaser and Purchaser agrees to purchase and take from the City all of the City's right, title and interest in and to the hereinafter described Lot 2, Block 1, including but not limited to, the City's right, title and interest in and to that certain Statement of Lease Agreement dated November 15, 1945 by and between F. S. Stimson Corporation, as lessor, and Edison Washington Stores, Inc., as lessee, as assigned to the City by Assignment of Ground Lease dated August 27, 1980 by and between Joseph W. Lund, Ross J. Beatty, John T. Fallon, Alfred C. Linkletter and William G. Myers as Trustees of Bradley Real Estate Trust and the City and that certain Assignment of Leases, Subleases and Tenancies and Assumption Agreement dated August 27, 1980 between the aforesaid Trustees and the City (herein collectively called "Ground Lease"), a copy of which is attached hereto as Exhibit C, which Ground Lease has a term expiring on July 31, 1998 (subject to extension by the lessee thereunder to a term expiring on July 31, 2028) and which conveys to

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the City a leasehold interest in and to that certain real property located in the City of Seattle and more particularly described as follows:

Lot 2, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington;  
EXCEPT the Westerly 12 feet of said lot condemned by the City of Seattle in King County Superior Court Cause No. 52280 for the widening of Fourth Avenue, as provided by Ordinance 13776 of said City; and EXCEPT the portion of said lot condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance No. 7733 of said City.

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EXHIBIT A

LOT 1: Block 1, Addition to the Tower of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington:

EXCEPT the Westerly 12 feet of said lot condemned by the City of Seattle in King County Superior Court cause No. 52280, for the widening of Fourth Avenue, as provided by Ordinance 13778 of said City; and

EXCEPT the Southeasterly 7 feet of said lot condemned by the City of Seattle, in King County Superior Court Cause No. 57057 for the widening of Pine Street as provided by Ordinance 14500 of said City; and

EXCEPT the portion of said lot condemned by the City of Seattle, in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance No. 7733 of said City.

LOT 2: Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington:

EXCEPT the Westerly 12 feet of said Lot 2 condemned by the City of Seattle in King County Superior Court Cause No. 52280 for the widening of Fourth Avenue, as provided by Ordinance 13778 of said City:

AND EXCEPT that portion of said Lot 2 condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance No. 7733 of said City.

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LOT 3: Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to the plat recorded in Volume 1 of Plats, page 103, in King County, Washington;

EXCEPT the Westerly 12 feet of said Lot condemned by the City of Seattle in King County Superior Court Cause No. 52280 for the widening of Fourth Avenue, as provided by Ordinance 13776 of said City.

LOT 7: Block 1, ADDITION TO THE TOWN OF SEATTLE, as laid off by the heirs of Sarah A. Bell, deceased (commonly known as Heirs of SARAH A. BELL'S ADDITION TO THE CITY OF SEATTLE), according to the plat recorded in Volume 1 of Plats, page 103, in King County, Washington:

EXCEPT the portion of said Lots condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance No. 7733 of said City.

LOTS 8, 9, 10 and 11: All those portions of Lots 8, 9 10 and 11, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle). according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington; lying Westerly of the West line of Westlake Avenue, as condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance 7733 of said City.

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LOTS 10, 11 and 12

Those portions of Lots 10, 11 and 12, Block 1, Addition to the Town of Seattle as laid off by the Heirs of Sarah A. Bell, deceased, (commonly known as Heirs of Sarah A. Bell's Addition to the City of Seattle), according to plat recorded in Volume 1 of Plats, page 103, in King County, Washington, lying Easterly of the East line of Westlake Avenue as condemned by the City of Seattle in King County Superior Court Cause No. 36118 for the establishing of Westlake Avenue as provided by Ordinance 7733 of said City:

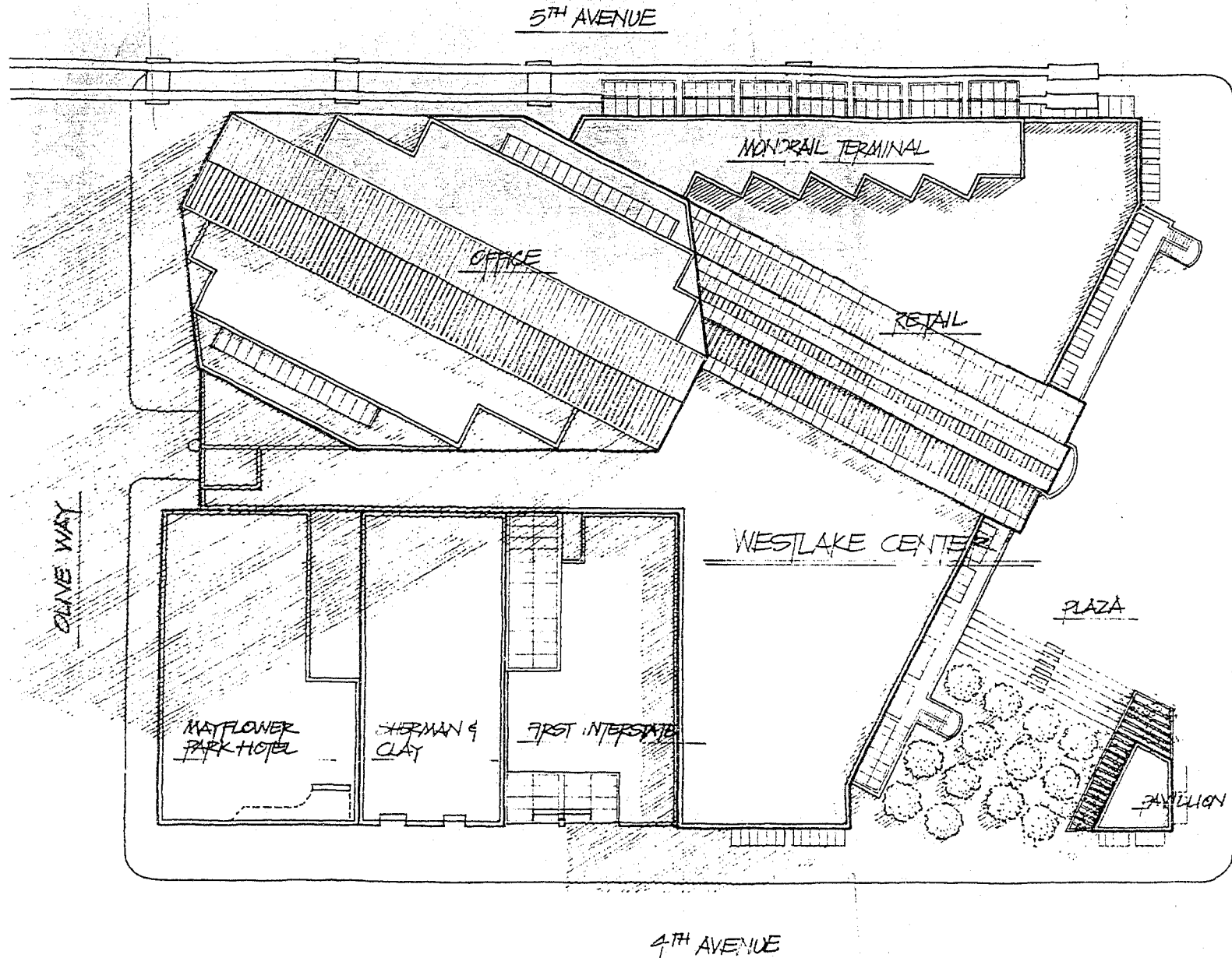
EXCEPT the southeasterly 7 feet of said Lot 12 condemned by the City of Seattle in King County Superior Court Cause No. 57057 for the widening of Pine Street as provided by Ordinance 14500 of said City.

TOGETHER WITH those portions of Westlake Avenue and the alley lying within said Block 1 which attached to the above-described Lots 1, 3, 8, 9, 10, 11 and 12 by operation of law upon the vacation thereof.

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Exhibit B  
Site Plan



AMENDMENT TO THE MONORAIL OPERATING  
AND EASEMENT AGREEMENT SCOPE OF WORK

THIS AGREEMENT made as of the 20<sup>th</sup> day of January, 1988, by and between the City of Seattle, a municipal corporation of the State of Washington, having its office at the Seattle Municipal Building, 600 Fourth Avenue, in The City of Seattle, Washington (hereinafter called "City") and Westlake Center Associates Limited Partnership (hereinafter "Associates"), a Washington limited partnership whose general partners are Rouse-Seattle, Inc., a Maryland corporation and Westlake 7 Building Partners Limited Partnership, a Washington limited partnership.

WHEREAS, the City and Associates have entered into that certain Monorail Operating and Easement Agreement dated February 13, 1987 (herein "Agreement") wherein, among other things, the parties have entered into an agreement respecting construction, maintenance, use and operation of certain elevated monorail tracks and monorail platform; and

WHEREAS, it is in the mutual benefit of the City and Associates to amend the Agreement to modify the scope of work provided for in Exhibit "C" of the Agreement, respecting the construction of a portion of the elevated monorail tracks.

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NOW, THEREFORE, in consideration of the promises and mutual obligations herein undertaken and other good and valuable consideration, the City and Associates agree as follows:

1. Exhibit "C" of the Agreement, providing for the design standards and scope of work applicable to the construction of the Monorail station and Monorail Platform is amended to include the following work to be performed by the Associates ("Associate Work") pursuant to the following conditions. To the extent there is a conflict between other provisions in the Agreement and the conditions pertaining to the additional scope of work contained in this amendment, the conditions in this amendment shall apply to the additional scope of work.
2. Associates Work shall include construction of the Guideway Piers and Vaults in that certain Contract known as the Monorail Contract 4. The description, conditions and requirements of said construction work are contained in Exhibit "1" to this Agreement, attached and incorporated by reference herein, which includes the following:

- (1) WASH DOT/APWA 1984 Standard Specifications, 1986 City of Seattle Supplement, as modified and amended by the 1986 City of Seattle Standard Plans, Special Provisions which is itself modified and amended by Special Provisions, Guideway Pier and Vaults Contract 4, as amended by Addendum No. 1;
- (2) Bid Document Drawings;
- (3) Bid Item List Contract 4 (City of Seattle);
- (4) Bid Item response list from Howard S. Wright Company;
- (5) Letter from Philip M. Frederick to Darrell Varge, dated October 27, 1987; and
- (6) City of Seattle Utilities Permit No. 48148.
- (7) Exhibits A & B1 and B2

*John*

3. Special Provisions, Section 2-08.9, LIQUIDATED DAMAGES (FAILURE TO COMPLETE WORK ON TIME) as stated Exhibit 1 shall not apply, but rather the following shall apply when there is a failure to complete work on time.

Time is of the essence in this Amendment, and Associates shall use all reasonable efforts to meet their contract milestones (as provided in Exhibit 1, item No. 1-a in the attached Addendum No. 1 to Special Provisions, Piers and Vaults, Contract No. (4)) in a timely fashion. Except as provided herein, Associates shall not be responsible to pay

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damages to the City or its agents for failing to complete their work on time, whether the delay to complete such work is due to the City's own negligence, the fault of third parties or otherwise. If there is a failure to complete work on time which is due to the negligence of Associates, their contractor, subcontractor or agents, and if as a direct result of said negligence there are delays to other contractors and/or subcontractors for the work and contract milestones of related projects (as identified in said Item No. 1-b of Addendum No. (1)), then Associates shall be responsible for the reasonable construction cost increases which may become necessary in order to reasonably achieve the contract milestones of said related projects and shall further, to the extent permitted by law, indemnify, save harmless and defend the City from any claims and liability from said other contractors and/or subcontractors resulting from such delay. Each party shall be responsible proportionately for their own negligent acts, errors and omissions resulting in such delays and claims and liability arising therefrom as governed by the laws of the State of Washington.

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4. Cost overruns and cost savings shall be treated as provided in that certain Contract for Sale ~~and Redevelopment~~ executed August 17, 1984, amended October 5, 1984 and further amended February 5, 1987 by and between the City and Associates (hereinafter the "Contract") and Section 4 of the Agreement. The work undertaken pursuant to this Agreement shall be for a price of Five Hundred Twenty Five Thousand Nine Hundred and Thirty Dollars (\$525,930.00) including general conditions, fees, state sales tax, B&O and Contingency but excluding bid item 32, Limestone Veneer identified in Exhibit 1, Bid Item List by the City of Seattle dated June 25, 1987, which work is eliminated as part of the work under this Agreement. For any change orders or for any work in excess of the price, (hereinafter referred to as cost overruns), Associates shall prior to authorizing or undertaking such work first seek approval from the City in writing by submitting its request which shall include a detailed written proposal, to:

Seattle Engineering Department  
Monorail Project Manager  
Attention: Phil Frederick  
Room 600 - Municipal Building  
Seattle, WA 98104

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For any change orders or any cost overruns involving less than Five Thousand Dollars (\$5,000), the City shall have three (3) working days from the date of the Associates' written request to notify Associates of its acceptance or rejection or shall be deemed to have given its acceptance to the work. For change orders or cost overruns in excess of Five Thousand Dollars (\$5,000.00), the City shall have ten (10) calendar days from the date of the Associates' written request to notify Associates of its acceptance or rejection; failure to so notify Associates shall make the City solely responsible for the additional costs attributable to the delay, but in no event shall silence or inaction on the part of the City be considered "deemed acceptance" so as to authorize the work.

The City shall be responsible for cost overruns (whether due to change orders or otherwise) except to the extent such cost overruns are due to the ~~fault or~~ negligence of Associates, their contractors, subcontractors or agents, in which event Associates shall be proportionally responsible for such additional costs and cost overruns. In any event

*[Handwritten signature]*  
*[Handwritten initials]*

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Associates, after following the notification and approval procedure as previously stated, shall thereupon provide payment for the additional costs or cost overruns and shall be reimbursed for the City's share of the costs in the manner provided for in Section 4 of the Agreement.

5. In the event that Associates are unable to complete construction of the work provided for in the Monorail Contract 4 within the time frame provided for, then, except to the extent provided for in paragraph 3 of this Amendment, the City shall not otherwise be relieved of its obligations to have the Monorail Station ready and open for business as provided for in Section 3 of the Agreement, nor shall it give rise to an extension of time for the City to meet its obligations as provided in Section 9(a)(vii) of the Agreement.
6. This Amendment to the Agreement is being executed by and on behalf of the City of Seattle by its Director of Community Development pursuant to Section 46 of that certain Contract for Sale of Property and Redevelopment executed August 17, 1984, as amended, and Section 38 of the Agreement.

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IN WITNESS WHEREOF, the City and Associates have executed this Agreement as of the day and year first hereinabove written.

ATTEST:

Judith S. Kilgore By: THE CITY OF SEATTLE  
Dan M. Moseley  
Director, Department  
of Community Development

WESTLAKE CENTER ASSOCIATES  
LIMITED PARTNERSHIP

ATTEST:

By: Rouse-Seattle, Inc.  
General Partner

\_\_\_\_\_  
By: Donald W. Coy  
Its V.P. / PRESIDENT

By: WESTLAKE 7 BUILDING PARTNERS  
LIMITED PARTNERSHIP,  
General Partner

ATTEST:

By: Koehler, McFadyen & Company,  
General Partner

\_\_\_\_\_  
By: Angela K. Kall  
Its PRESIDENT

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STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

On this day personally appeared before me David Mosley to me known to be the Director, Dept. of Community Development of the municipal corporation that executed the within and the foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of said municipal corporation for the uses and purposes therein mentioned and on oath stated that they are authorized to execute said instrument and that the seal affixed is the corporate seal of said municipal corporation.

WITNESS my hand and seal this 15<sup>th</sup> day of February, 1988.

Juanita E. Serrato  
NOTARY PUBLIC in and for the State of Washington, residing at Seattle.  
My Commission expires 1-29-88

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I hereby certify that on this 20<sup>th</sup> day of February 1988, personally appeared before me Darrell M. Valse and \_\_\_\_\_, to me known to be the Vice President and \_\_\_\_\_ respectively of Rouse-Seattle, Inc., a corporation executing the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of said corporation as general partner of Westlake Center Associates Limited Partnership for the uses and purposes therein mentioned and on oath stated that they are authorized to execute said instrument.

WITNESS my hand and official seal this 2<sup>nd</sup> day of February, 1988.

Robin Bushnell  
NOTARY PUBLIC in and for the State of Washington, residing at Seattle.  
My Commission expires 1-17-90

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I hereby certify that on this 2nd day of February  
1988, personally appeared before me Stephen K. Koehler  
and President, to me known to be the

and  
respectively of Koehler, McFadyen & Company, a corporation  
executing the within and foregoing instrument as general  
partner of Westlake 7 Building Partners Limited Partnership  
and acknowledged said instrument to be the free and voluntary  
act and deed of said corporation for the uses and purposes  
therein mentioned and on oath stated that they are authorized  
to execute said instrument.

WITNESS my hand and official seal this 2nd day of  
February, 1988.

Robin Bushnell  
NOTARY PUBLIC in and for the State of  
Washington, residing at Seattle  
My Commission expires 1-17-90

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
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RECEIVED

48148

# THE CITY OF SEATTLE

DEPARTMENT OF ENGINEERING

## APPLICATION FOR UTILITIES PERMIT TO THE BOARD OF PUBLIC WORKS

DIRECTOR OF  
ENGINEERING

DISTRIBUTION	
ORIGINAL—	Director of Engineering
WHITE—	Permittee
YELLOW—	Inspector
PINK—	Inspector
PINK—	Const. Crew

The undersigned (pursuant to Ordinance No. 90047) hereby applies for permission to

Construct monorail piers, vaults and ducts in 5th Avenue adjacent to Westlake Center in accordance with the Monorail Agreement; Letter dated 10/26/87, Frederick to Vange; and contract documents associated with Seattle Engineering Department Plan No. 782-163.

- Permittee to do restoration between curb and property line.
- Permittee to do full restoration of street right-of-way with full time inspection by Director of Engineering.
- Seattle Engineering Department to do restoration between curb and property line.

Permittee/Contractor Rouse-Seattle Inc./ By [Signature] Date 11-25-87  
H. S. Wright, Inc.  
I recommend that this permit be granted, subject to the conditions set forth therein.

Date December 7, 1987 By [Signature]  
DIRECTOR OF ENGINEERING

WORK UNDER THIS PERMIT SHALL BEGIN WITHIN SIX MONTHS OF THE DATE OF THE PERMIT UNLESS OTHER ARRANGEMENTS ARE MADE, OTHERWISE PERMIT SHALL BE REVOKED.

### PERMIT

THE ABOVE APPLICATION IS HEREBY GRANTED SUBJECT TO GRANTEE:

- Complying with all City Ordinances and Board of Public Works regulations;
- Notifying the Director of Engineering of the time the work will start, and when it will finish; ~~XXXXXXXXXXXXXXXXXXXX~~
- Notifying any utility or property owner subject to damage or inconvenience during performance of the work, and, grantee shall make all arrangements necessary for the protection of any such utility or owner interest;
- Prosecuting the work with diligence and with due respect to all property, contracts, persons, rights and the interests and convenience of the public;
- Saving the City harmless from any and all damages which may accrue to any person or property because of this installation or maintenance;
- NOTIFYING THE UTILITIES OF THE WORK BY CALLING 1-800-424-5555 48 HOURS BEFORE DIGGING.
- Complying with special conditions below and on back as noted:

- UNDERGROUND CONSTRUCTION       CUSTOMER SERVICE       AERIAL CONSTRUCTION
- CONDITION NO'S 1, 2, 4, 7, 8, 9

FAILURE TO GIVE NOTICE TO DIRECTOR OF ENGINEERING WILL RESULT IN THE ASSESSMENT OF A MINIMUM OF ONE HOUR INSPECTION TIME CHARGED AGAINST THE PERMITTEE.

Maintain a minimum of subject to spec lane(s) of vehicular traffic in each direction at all times.

Hours of Work: 6:00 a.m. to 7:00 p.m. subject to Section 1-08.11(1) in City Supplement

Board of Public Works      Date \_\_\_\_\_  
[Signature] Chairman      \_\_\_\_\_ Director of Engineering  
[Signature] Exec. Secretary      By \_\_\_\_\_

The undersigned accepts this permit and agrees to abide by the conditions thereof.

Permittee/Contractor \_\_\_\_\_ By \_\_\_\_\_ Date \_\_\_\_\_

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

00143

# 1984 Standard Specifications

for Road, Bridge, and Municipal  
Construction



Washington State Department of Transportation



American Public Works Association  
Washington State Chapter

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
IT IS DUE TO THE QUALITY OF THE DOCUMENT.

STATE / ASPWA STANDARD SPECS - 1984  
and CITY OF SEATTLE AMENDMENTS

DIVISION 1

Amended for  
Monorail Rehab and Upgrade  
Contract 4

1/13/88

A - Amended: see City of Seattle  
Amendments to Division 1 dated  
August 11, 1987.  
DIVISION 1  
NIC = Not in contract

GENERAL REQUIREMENTS

A-01 DEFINITIONS AND TERMS

The following abbreviations and terms are defined here as they are used in any contract documents and specifications.

1-01.1 Abbreviations

1-01.1(1) Associations

These abbreviations are used in plans and specifications as defined here:

- A.A.N. American Association of Nurserymen
- A.A.R. Association of American Railroads
- A.A.S.H.T.O. American Association of State Highway and Transportation Officials
- A.C.I. American Concrete Institute
- A.G.A. American Gas Association
- A.G.C. Associated General Contractors of America
- A.I.A. American Institute of Architects
- A.I.E.E. American Institute of Electrical Engineers
- A.I.S.C. American Institute of Steel Construction
- A.I.S.I. American Iron and Steel Institute
- A.N.S.I. American National Standards Institute
- A.P.W.A. American Public Works Association
- A.R.A. American Railway Association
- A.R.E.A. American Railway Engineering Association
- A.S.A. American Standards Association
- A.S.C.E. American Society of Civil Engineers
- A.S.L.A. American Society of Landscape Architects
- A.S.T.M. American Society for Testing and Materials
- A.W.P.A. American Wood Preservers' Association
- A.W.S. American Welding Society
- A.W.W.A. American Water Works Association
- D.I.P.R.A. Ductile Iron Pipe Research Association
- F.H.W.A. Federal Highway Administration
- F.S.S. Federal Specifications and Standards, General Services Administration
- M.S.H.A. Mine Safety and Health Act
- N.E.C. National Electrical Code
- N.E.M.A. National Electrical Manufacturers' Association
- O.S.H.A. Occupational Safety and Health Administration
- R.C.W. Constitution Provisions State of Washington
- S.A.E. Society of Automotive Engineers

S.S.P.C.	Steel Structures Painting Council
U.S.A.S.I.	United States of American Standards Institute
W.I.S.H.A.	Washington Industrial Safety and Health Administration
W.S.D.O.T.	Washington State Department of Transportation

#### 1-01.1(2) Items of Work and Units of Measurement

Plans and specifications may include common engineering and construction abbreviations. Many such abbreviations need no definition. But when the following abbreviations are used, they will only mean:

ACP	Asphalt Concrete Pavement
Agg.	Aggregate
Al.	Aluminum
ATB	Asphalt Treated Base
BST	Bituminous Surface Treatment
Cl.	Class
Conc.	Concrete
Culv.	Culvert
C.Y. or Cu. Yd.	Cubic Yard(s)
Diam.	Diameter
Est.	Estimate or Estimated
Excl.	Excluding
Ft.	Foot or Feet
Hund.	Hundred
In.	Inch or Inches
Incl.	Including
Lb.	Pound(s)
L.F. or Lin. Ft.	Linear Foot (Feet)
L.S.	Lump Sum
M	Thousand
MBM	Thousand Feet Board Measure
Pres.	Pressure
PVC	Polyvinyl Chloride
Reg.	Regulator
Reinf.	Reinforced, Reinforcing
Sec.	Section
Str.	Structural
S.Y. or Sq. Yd.	Square Yard(s)
Th.	Thick or Thickness
Tr.	Treatment
V.C.	Vitrified Clay

#### 1-01.2 Auxiliary Lane

The part of the roadway next to traveled ways for parking, speed changes, turning, weaving, truck climbing or for anything that adds to through traffic movement.

#### 1-01.3 Bid, Proposal

The offer of a bidder on a properly completed proposal form to perform the contract.

#### 1-01.4 Bidder

A prequalified individual, partnership, firm, corporation, or joint venture, submitting a proposal.

#### 1-01.5 Bridge Approach Embankments

An embankment beneath a structure and extending 100 feet beyond a structure's end (at subgrade elevation for the full embankment width) plus an access ramp on a 10:1 slope to the original ground elevation. Also, any embankment that replaces unsuitable foundation soil beneath the bridge approach embankment.

#### 1-01.6 Commission, Washington State Transportation Commission

The appointive body having authority over state transportation matters as provided by law.

#### 1-01.7 Contract

The written agreement between the contracting agency and the Contractor. It describes, among other things:

1. What work will be done, and by when,
2. Who provides labor and materials, and
3. How Contractors will be paid.

The contract includes the proposal, plans, specifications, amendments, special provisions, addenda, supplemental agreements, and change orders.

#### 1-01.8 Contract Bond

The approved form of security furnished by the Contractor and his surety as required by the contract.

#### 1-01.9 Contractor

The individual, partnership, firm, corporation, or joint venture, contracting with the State to do prescribed work.

#### 1-01.10 Department, Department of Transportation

The Agency authorized by law to administer transportation-related work.

#### 1-01.11 Engineer

The Secretary of Transportation, acting directly or through his authorized representatives.

#### 1-01.12 Federal Highway Administration

The Federal Agency authorized to approve plans and contracts for Federal Aid Highway projects. They also inspect such projects to ensure contract compliance.

#### 1-01.13 Frontage Road

A local street or road usually next to an arterial highway that serves abutting property and adjacent areas and controls access.

#### 1-01.14 Highway

A public way for vehicles, including the entire right of way.

#### 1-01.15 Inspector

The Project Engineer's representative who inspects contract performance in detail.

**1-01.16 Laboratory**

The official laboratories of the Department of Transportation, including district laboratories or other laboratories the Department authorizes to test work, soils and materials.

**1-01.17 Major Contract (Bid) Item**

Any item whose contract price exceeds \$35,000.00, as determined by original proposed quantities and unit contract prices.

**1-01.18 Plans**

The contract drawings which show location, character, and dimensions of prescribed work including layouts, profiles, cross-sections, and other details.

**1-01.19 Project Engineer**

The Engineer's representative who directly supervises the engineering and administration of a construction project.

**1-01.20 Right of Way**

Land, property, or property interest, usually in a strip, acquired for or devoted to transportation purposes.

**1-01.21 Roadbed**

The graded part of a highway within top and side slopes that forms a foundation for the pavement structure and shoulders.

**1-01.22 Roadway**

Any construction work within the right of way.

**1-01.23 Secretary, Secretary of Transportation**

The chief executive officer of the Department and agents authorized to act in his behalf.

**1-01.24 Shoulder**

The part of the roadway next to the traveled way. It provides lateral support of base and surface courses and is an emergency stopping area for vehicles.

**1-01.25 Special Provisions**

Additions and revisions to the standard and supplemental specifications that apply to an individual project.

**1-01.26 Specifications**

Provisions and requirements for the prescribed work.

**1-01.27 State**

The State of Washington acting through its representatives.

**1-01.28 Structures**

Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, service pipes, sewers, underdrains, foundation drains, and other features found during work that the contract may or may not classify as a structure.

**1-01.29 Subcontractor**

An individual, partnership, firm, corporation, or joint venture who is sublet part of the contract by the Contractor.

**1-01.30 Subgrade**

That part of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

**1-01.31 Substructure**

The part of the structure below:

1. Simple and continuous span bearings, or
2. Arch skewbacks and construction joints at the top of vertical abutment members or rigid frame piers.

Substructures include backwalls, wingwalls and wing protection railings.

**1-01.32 Superstructure**

The part of the structure above:

1. Simple and continuous span bearings, or
2. Arch skewbacks and construction joints at the top of vertical abutment members or rigid frame piers.

Superstructures do not include backwalls, wingwalls, and wing protection railings unless supported by the superstructure.

**1-01.33 Surety**

A person or company that is responsible for the bidder's execution of the contract and contract bond, or is bound with the Contractor to ensure performance of the contract, payment of all obligations pertaining to the work, and fulfillment of such other conditions as are specified in the contract, contract bond, or otherwise required by law.

**1-01.34 Titles (Or Headings)**

The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

**1-01.35 Traveled Way**

The part of the road made for vehicle travel excluding shoulders and auxiliary lanes.

**1-01.36 Work**

The provision of all labor, materials, equipment, and everything needed to successfully complete a project according to contract specifications.

**1-01.37 Working Drawings**

Shop drawings, erection plans, falsework plans, framework plans, cofferdam, cribbing and shoring plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor must submit to the Engineer for approval.

## 1-02 BID PROCEDURES AND CONDITIONS

## A 1-02.1 Prequalification of Bidders

To receive a bid proposal, a prospective bidder shall submit to the Department a Standard Questionnaire and Financial Statement which reveals the financial ability and experience of the bidder to perform highway, road or other public work. The questionnaire shall be sworn to before a person authorized to take oaths. The questionnaire shall be submitted once a year and at such other times as the Department may require.

A prospective bidder who has not been qualified or one from whom a supplemental questionnaire is due, may not be given a bid proposal unless the bidder has submitted his prequalification questionnaire and financial statement, or supplements thereto, at least seven calendar days before the date of opening bids for a specific project.

Two or more prospective bidders may prequalify and bid jointly as a joint venture on a single contract. Each shall have filed a Standard Questionnaire and Financial Statement and shall also file a standard form of Individual Project Statement of Joint Venture.

If two or more prospective bidders desire to bid jointly as a continuous joint venture on more than one contract, they shall submit a Standard Questionnaire and Financial Statement compiled for the Joint Venture and a copy of a Standard Questionnaire and Financial Statement for each member if such is not already on file. A copy of the Joint Venture Agreement shall also be submitted. The continuing Joint Venture is then treated as a new firm and prequalified as such. A Joint Venture and any of its members are subject to Section 1-02.14. The Joint Venture Agreement shall be signed by each member of the Joint Venture and shall specify each individual authorized to execute documents on behalf of the joint venture. If any prospective bidder is a corporation, the agreement shall be accompanied by a corporate resolution authorizing the joint venture agreement and designating the officer(s) authorized to sign the joint venture agreement or contract in its behalf.

The Department will prequalify a bidder only for the type and amount of work for which a bidder is deemed qualified. The Department may reduce the amount for which a bidder is prequalified or withdraw prequalification if it is deemed that the reduction or withdrawal is justified as a result of outstanding work the bidder has under contract (whether with the State or not) or for unsatisfactory performance on a past or present State contract.

If the information contained in the questionnaire and financial statement is not sufficient, the Department may refuse to furnish a bid proposal and any bid proposal submitted by the bidder will be disregarded. Such refusal will be conclusive unless appeal is made to the Superior Court of Thurston County within five days. The appeal shall be heard within ten days after it is made and on five days' notice to the Department. The Department may determine that a prequalified bidder is not responsible upon opening bids.

The bidder is responsible for determining that the amount of his bid plus the amount of outstanding work with the State does not exceed his prequalification amount. If the amount of a bid in addition to the amount of any outstanding work under contract with the State exceeds the amount of the bidder's prequalification, the Department may determine that the bidder is not responsible and may refuse to award a contract to the bidder.

## A 1-02.2 Plans and Specifications

Copies of plans and specifications (bidding documents) will be on file in the offices of the Department District Administrators, the office of the County Engineer in the county in which the work is located, and the chapter offices of the Associated General Contractors of America (in Seattle, Spokane, Tacoma, and Wilsonville, Oregon).

Bidding documents may be obtained from the Department of Transportation at Olympia, Washington by payment of the amount set forth in the call for bids. The fee shall accompany requests for plans. Checks shall be made payable to the State Treasurer, Department of Transportation.

After award of the contract, plans and specifications will be issued without charge on the following basis:

To Prime Contractor	No. of Sets	Basis for Distribution
Reduced plans (11" x 18") and special provisions	10	Furnished automatically upon award.
Additional reduced plans (11" x 18") and special provisions	10	Furnished only upon request for projects with more than 100 plan sheets.
Large plans (24" x 36") and special provisions	1	Furnished only upon request.
Additional large plans (24" x 36") and special provisions	1	Furnished only upon written request for projects with more than 100 plan sheets.

To Subcontractors and Suppliers	No. of Sets	Basis for Distribution
Reduced plans (11" x 18") and accompanying special provisions	1	Furnished only upon request by the Prime Contractor for an approved subcontractor or material supplier.

Additional plans may be obtained by payment of the current rates.

## NC 1-02.3 Estimated Quantities

The quantities shown in the proposal and the contract forms are estimates only and are stated only for bid comparison purposes. The State does not warrant expressly or by implication, that the actual quantities of work will correspond with those estimated. The Department reserves the right to increase or decrease the amount of any item of work, or to make other changes in the work as necessary. Payment will be made on the basis of the actual quantities of each item of work completed in accordance with the contract requirements.

## 1-02.4 Examination of Plans, Specifications, and Site of Work

The bidder shall carefully examine the sites (including material sites) of the proposed work, the proposal, plans, special provisions, specifications, addenda, and contract forms. The submission of a bid shall be conclusive evidence that the bidder has made such examinations and understands all the requirements for the performance of the completed work.

The bidder shall be familiar with all Federal, State, and local laws, ordinances,

and regulations which might affect those engaged in the work, the materials, equipment or procedures used in the work, or which in any other way could affect the completion of the work. No plea of misunderstanding or ignorance of the law will be considered.

The bidder shall determine the methods, materials, labor, and equipment required to perform the completed work and shall reflect their cost in the bid prices. Any costs exceeding those anticipated by the bidder will not entitle him to additional compensation except as may be provided in Section 1-04.

If the Department has made sub-surface investigation of the site of the proposed work, the boring log data and soil sample test data accumulated by the Department will be made available for inspection by the bidders. It is mutually recognized and agreed to by all parties that:

1. When any of this data is included in the contract plans, it is for information and does not constitute a part of the contract.
2. The sub-surface investigations made by the Department were for the sole purpose of furnishing data necessary for the planning and design of the project.
3. The Department assumes no responsibility whatsoever for the sufficiency or completeness of the data furnished with respect to meeting the needs of the bidder in planning his work.
4. The Department warrants that the data represents with reasonable accuracy the conditions and materials found in the specific borings at the time the borings were made. The Department does not warrant the condition, materials, or proportions of the materials between the specific borings.
5. The Department makes no representation or warranty expressed or implied that:
  - (a) The interpretations from the data are correct.
  - (b) Moisture conditions and indicated water tables will not vary substantially from those found at the time the borings were made.
  - (c) The ground at the location of the boring has not been physically disturbed or altered after the boring was made.
6. The availability of sub-surface information from the Department is solely for the convenience of the bidder and shall not relieve the bidder or the Contractor from any risks or of any duty to make his own examinations and investigations as required by this section or any other responsibility under the contract.

**1-02.5 Proposal Forms**

Upon request, a proposal will be furnished to a prequalified bidder for projects for which he is eligible to bid. The proposal will identify the project, its location and describe the work. It will list the estimated quantities, the items of work, and the materials to be furnished at the unit bid prices. Spaces to be filled in by the bidder are provided on the proposal for unit prices, extensions, the total bid amount, signatures, date, acknowledgment of addenda, and address of the bidder. Required certifications are included as appropriate as a part of the proposal.

**1-02.6 Preparation of Proposal**

Only properly executed proposals submitted on the form furnished by the Department will be accepted. The informational proposal will be considered only

when authorized to be used in writing.

A price per unit shall be submitted for each item. Each price per unit shall be extended, and the total of all extensions (contract total price) shall be clearly entered on the proposal. All prices shall be in figures only, legible, and in ink or typed. Unit price figures exceeding four places to the right of the decimal will be dropped.

Receipt of all addenda shall be acknowledged on the proposal in the space provided on the signature sheet.

A completed "Disadvantaged, Minority or Women's Business Enterprise Certification" shall be submitted with the proposal when applicable.

A firm doing business under an assumed name shall submit a certified copy of a "Certificate of Assumed Name" with the proposal if such is not on file with the Department.

Proposals of corporations shall be signed by the officer or officers having authority to sign them. If a bidder is a co-partnership, the proposal shall be signed by an authorized member of the co-partnership. When the bidder is a joint venture, the proposal shall be signed by one or more individuals as authorized by the Joint Venture.

**1-02.7 Bid Bond**

All bids shall be accompanied by a cash deposit, certified check, cashier's check, or surety bond in an amount equal to at least 5 percent of the total bid.

A surety bond, signed by the bidder and his surety, shall be submitted on a form furnished by the Department. The surety shall be registered with the Washington State Insurance Commissioner, and the surety's name shall appear in the current Authorized Insurance Company List in the State of Washington published by the Office of the Insurance Commissioner.

**1-02.8 Non-Collusion Certificate**

When required by Section 112(c) Title 23, United States Code, a bidder shall certify that he has not participated in collusion or other action in restraint of competitive bidding.

This certificate shall be executed and sworn to before a person who is authorized to administer oaths. By signing the proposal, the bidder will be deemed to have signed and agreed to the provisions of the Non-Collusion Certificate.

**1-02.9 Delivery of Proposal**

Each proposal shall be sealed and submitted in the envelope provided with it. All blanks on this envelope shall be completed to ensure proper handling and delivery.

Proposals that are not received by the Department before the time fixed for opening bids in the call for bids will not be considered.

**1-02.10 Withdrawal or Revision of Proposal**

A bidder may withdraw or revise his bid proposal after it has been deposited with the Department if a written request for such, signed by an authorized individual, is received by the Department before the time for opening bids. The original proposal, as revised in writing and timely received, will be acceptable as the official bid.

**1-02.11 Combination and Multiple Proposals**

A project may be organized for bidding and construction by various methods

to enable proposals to be submitted for combined projects or for the construction method specified. The Department reserves the right to award combined or separate bids or by such other method deemed most advantageous to the State. Only those combined bids specifically prescribed in the project special provisions will be accepted. If contracts are awarded for combinations of projects, separate contracts will be written for each project included in the combination.

A bidder submitting more than one proposal at a letting may attach one of the following statements to each proposal:

"We prefer to be awarded not more than (Number) contracts for projects for which we have submitted bids at this letting;" or

"We prefer to be awarded contracts of a total value of not more than \$\_\_\_\_\_ for projects for which we have submitted bids at this letting."

Such attachments will not make the proposals irregular. The Department will award each contract to the lowest responsible bidder but will consider such attachment in determining the responsibility of the bidder to perform each contract for which a statement has been attached.

#### 1-02.12 Public Opening of Proposals

Proposals will be opened and publicly read at the time indicated in the call for bids unless the bid opening has been delayed or canceled. Bidders, their authorized agents, and other interested parties are invited to be present.

#### 1-02.13 Irregular Proposals

1. A proposal will be considered irregular and will be rejected if:
  - (a) The authorized proposal form furnished is not used or is altered;
  - (b) The completed proposal form contains any unauthorized additions, deletions, alternate bids, or conditions;
  - (c) The bidder adds provisions reserving the right to reject or accept the award, or enter into the contract;
  - (d) The proposal is not properly executed;
  - (e) The bidder is not prequalified; or
  - (f) A price per unit cannot be determined.
2. A proposal may be considered irregular and may be rejected if:
  - (a) The proposal does not include a unit price for every bid item;
  - (b) The bid bond or other security is insufficient or improper;
  - (c) Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable bid) to the potential detriment of the State;
  - (d) Receipt of addenda is not acknowledged;
  - (e) A member of a joint venture and the joint venture submit proposals for the same project (in such an instance, both bids may be rejected); or
  - (f) If proposal entries are not made in ink.

#### 1-02.14 Disqualification of Bidders

A bidder may be deemed not responsible and his proposal rejected if:

- (a) More than one proposal is submitted for the same project from a bidder under the same or different names;
- (b) Evidence of collusion exists with any other bidder. Participants in collusion will be restricted from submitting further bids;
- (c) A bidder is not prequalified for the work or to the full extent of his bid;

- (d) An unsatisfactory performance record exists based on past or current Department work;
- (e) There is uncompleted work (Department or otherwise) which might hinder or prevent the prompt completion of the work bid upon;
- (f) The bidder failed to settle bills for labor or materials on past or current contracts;
- (g) The bidder has failed to complete a written public contract or has been convicted of a crime arising from a previous public contract;
- (h) The bidder is unable, financially or otherwise, to perform the work;
- (i) A bidder is not authorized to do business in the state of Washington; or
- (j) There are any other reasons deemed proper.

#### 1-02.15 Pre-Award Information

Before any contract is awarded, the bidder may be required to furnish a complete statement as to the origin, composition, and manufacture of any or all materials to be used in the project, together with samples which may be subjected to tests to determine their quality and fitness for the work as provided for in the contract. He may also be required to submit a progress schedule in the form required by the Department, showing the order of and time required on the various phases of the work. Additionally, he may be required to submit a breakdown of costs assigned to any bid item or attend a conference with the Secretary or his representatives prior to contract award.

## 1-03 AWARD AND EXECUTION OF CONTRACT

## 1-03.1 Consideration of Bids

After opening and reading proposals, they will be checked for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. The total of extensions, corrected where necessary, will be used for award purposes and to fix the amount of the contract bond.

The right is reserved to waive informalities in the bidding, accept a proposal of the lowest responsible bidder, reject any or all bids, republish the call for bids, revise or cancel the work, or require the work to be done in another way if the best interest of the State is served.

## 1-03.2 Award of Contract

A contract will normally be awarded or bids rejected within 30 calendar days after bids are opened. Upon mutual consent of the lowest responsible bidder and the Department, the 30 calendar day limit may be extended. The successful bidder will be notified in writing when he has been awarded the contract.

## 1-03.3 Execution of Contract

The successful bidder shall sign and return the contract furnished by the Department within 20 calendar days after the day of award. Pre-award information requested under provisions of Section 1-02.15 shall be provided by the bidder prior to contract execution.

No proposal is binding upon the State until a contract is executed by the Department. Work shall not begin within the project limits or within State-furnished sites before the contract is executed by the Department. Any work begun outside such areas or material ordered prior to execution shall be at the Contractor's risk.

## 1-03.4 Contract Bond

The successful bidder shall furnish an executed bond on a form furnished by the Department and signed by an approved surety or sureties in the full amount of the contract price. The bond shall be conditioned upon the faithful performance of the contract by the Contractor within the prescribed time. The bond shall provide that the surety agrees to protect and indemnify the State against any direct or indirect loss claimed by reason of failure by the Contractor or any of the Contractor's employees, subcontractors, or agents to faithfully perform the contract, or by reason of failure by the Contractor to pay all laborers, mechanics, subcontractors, agents, materialmen, and all persons who shall supply such Contractor, subcontractor, or agents with provisions or supplies for carrying on the work.

The Department may require any sureties or surety company to appear and qualify themselves upon the bond. Whenever the surety or sureties are deemed insufficient, the Department may demand in writing that the Contractor furnish additional surety in an amount not exceeding that originally required as may be necessary to cover the remaining work. No further payments will be made on the contract until additional surety as required is furnished.

## 1-03.5 Failure to Execute Contract

If the successful bidder fails to sign and return the contract and furnish satisfactory bond within 20 days from the date of award or refuses (in writing)

to enter into the contract, his proposal bond or deposit shall be forfeited. The Department may then award the contract to the second lowest responsible bidder. If the second lowest responsible bidder fails to enter into the contract and furnish bond within 20 days after award to him, his proposal bond or deposit shall also be forfeited. The contract may be awarded successively in a like manner to the remaining lowest responsible bidders until the contract and bond are executed by a responsible bidder or the remaining proposals are rejected.

The time for the successful bidder to sign and return the contract and furnish satisfactory bond may be extended for a maximum of 20 additional days if required by the bidder and the Department deems circumstances warrant an extension.

## 1-03.6 Return of Bid Bond

When proposals have been examined and corrected as necessary, proposal bonds and deposits accompanying proposals ineligible for further consideration will be returned. All other proposal bonds and deposits will be held until the contract and the performance bond have been executed. When the contract has been executed, all remaining deposits or bonds, except those subject to forfeiture, will be returned.

## 1-04 SCOPE OF THE WORK

## 1-04.1 Intent of Contract

The intent of the contract is to prescribe a complete work. The Contractor shall furnish all labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete all contract work. The unit contract bid prices will be full pay for all work and materials required to fully complete the work.

## 1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, Addenda

The contract form, plans, special provisions, specifications, addenda, and other supplemental documents are all essential parts of the contract; and a requirement occurring in one is binding as though occurring in all. They are intended to be complementary and prescribe a complete work. Any work or material that has been omitted from the description of the work but is clearly implied shall be furnished by the Contractor as though it had been specifically stated.

In case of discrepancies, plans shall govern over specifications; supplemental specifications shall govern over standard specifications; and special provisions shall govern over specifications and plans. On the plans or drawings, figured dimensions shall govern over scaled dimensions. In case of any ambiguity or dispute over interpretation of the provisions of the contract, the decision of the Secretary will be final.

## 1-04.3 Special Provisions—Unit Bid Items

The special provisions may describe work that is not covered by the specifications. The work shall be performed in accordance with the special provisions and in accordance with the specifications insofar as applicable. All costs incurred in the performance of the work shall be included in the unit prices for the work. Any work that is required by the special provisions but does not have a unit price shall be considered incidental to the construction, and all costs shall be included in the unit prices that are in the contract.

## 1-04.4 Changes

The State reserves the right to make changes in the work within the general scope of the contract at any time during the progress of the work. The changes may include but are not limited to:

- a. deletion of any portion of the work;
- b. increases or decreases in quantities;
- c. changes in specifications and/or designs;
- d. the method or manner of performance of the work;
- e. addition of any new work;
- f. State-furnished facilities, equipment, materials, services, or sites; or
- g. directing acceleration or delay in the performance of the work.

Changes will be set forth in a written change order except as provided herein.

Deleted work, item "a" above, will be paid for as provided in Sections 1-09.4 and 1-09.5.

Increased or decreased quantities, item "b" above, in excess of 25 percent of the original contract or of a major item will be paid for as provided in Section 1-04.6. Overruns or underruns of 25 percent or less of the original contract or of a major

item need not be evidenced by written change order. The work shall be performed at applicable unit prices and within the contract time.

If the Engineer determines that any change for items "c, d, e, f, and g" above causes an increase or decrease in the Contractor's cost of, or time required for, the performance of any part of the work, including unchanged work, an equitable adjustment will be made and the contract modified by a written change order.

The equitable adjustment will be by agreement of the parties. If the parties are unable to agree, the Engineer will determine the equitable adjustment by using unit contract prices, or by establishing the costs by other means, or by using force account, and adjust the time as he deems appropriate.

Any claim by the Contractor for additional entitlement because of any direction, instruction, interpretation, or determination from the Engineer other than a change order will be evaluated by the Engineer provided that the Contractor gives written notice of protest as provided in Section 1-04.5.

The Contractor shall proceed with the work upon receipt of a change order approved by the Engineer. If ordered orally by the Engineer, the Contractor shall proceed with the work before actual receipt of an approved change order.

Changes which are normally noted on field stakes need not be evidenced by written change order and shall be performed at applicable unit prices and within the contract time. The Contractor shall conform his work to that indicated on the field stakes without further notice or delay.

## 1-04.5 Procedure and Protest by the Contractor

The Contractor accepts the terms and conditions of a change order by endorsement of the change order, by acceptance through separate writing, or by failure to protest as provided in this section. Any change order accepted by the Contractor shall be full equitable adjustment for any work changed or required by the change order.

The Contractor also accepts any written or oral order, direction, instruction, interpretation, or determination from the Engineer by failure to protest as provided in this section.

If the Contractor disagrees with the terms or conditions of a change order or other written or oral order, the Contractor shall:

1. Immediately give oral notice to the Project Engineer of protest before performing the work;
2. Within 15 calendar days of receipt of the order, provide a written notice of protest;
3. Within 30 calendar days of providing written notice of protest, provide a written statement specifying the contract provisions providing entitlement, an estimate of the monetary extent (if any) of any claim, and an estimate of the additional time (if any) incurred; and
4. Before final payment of the contract, provide a written statement of the actual adjustment that is requested.

When a Contractor protests a change order or other written or oral order, the Contractor shall keep full and complete records of the costs and additional time incurred. The Contractor shall permit the Engineer to have access to those records and any other records the Engineer deems necessary to assist in evaluating the protest.

All protests will be evaluated by the Engineer. If the Engineer finds the protest to

have merit, the Engineer will make an equitable adjustment in the amount of costs to be paid for the work or the time required as he deems proper. If the Engineer finds the protest to be without merit, no adjustment will be made.

Protest shall not relieve the Contractor from his obligation to proceed promptly with the work as ordered by the Engineer.

#### 1-04.6 Increased or Decreased Quantities

If there is any change that increases or decreases by more than 25 percent:

1. the total cost of the work when calculated from the original bid quantities and unit prices, or
2. the total quantity of any major contract item when calculated from the original bid quantities,

the adjustment for that portion of the work or the major item in excess of the 25 percent increase or decrease shall be as follows:

##### Increases

Increases in excess of 25 percent will be determined by agreement of the parties. If the parties are unable to agree, the Engineer will determine the equitable adjustment by using unit contract prices, or by establishing the costs by other means, or by using force account and adjust the time as he deems appropriate.

##### Decreases

Decreases in excess of 25 percent will be determined by agreement of the parties. If the parties are unable to agree, the Engineer will determine the adjustment taking into account a redistribution of fixed costs.

Written consent of the surety or sureties will be required for changed work if the costs are in excess of 25 percent of the original contract price or when otherwise specifically requested by the Engineer.

When ordered by the Engineer, the work shall proceed pending determination of the adjustment in costs or time for the change.

When the State has entered an amount for any contract item solely for the purpose of providing a common bid for all bidders, increases or decreases for (1) and (2) above will not apply to these items. Any impact due to an increase or decrease in the amount provided for the purpose of obtaining a common bid shall be the sole risk of the Contractor.

#### 1-04.7 Changed Conditions (Differing Site Conditions)

The Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing of: (1) preexisting subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (2) preexisting unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract. The Engineer will promptly investigate the conditions. If the Engineer finds that conditions are materially different and cause a material increase or decrease in the Contractor's cost of, or the time required for performance of, any part of the work under this contract, whether or not changed as a result of such conditions, the Engineer will make an equitable adjustment in the payment for the performance of the work or the time required. The adjustment will be by agreement with the Contractor. If the parties are unable to agree, the Engineer will determine the amount of the equitable adjustment by establishing the

costs or by using force account, and adjust the time as he deems appropriate. If the Engineer determines that changed conditions do not exist and no adjustment in costs or time is warranted, such determination shall be final and binding.

No claim of the Contractor, under this clause, shall be allowed unless the Contractor has given the notice required above; provided, however, the time will be extended by the Engineer for good cause shown. The time will not be extended beyond the time that the Contractor knew or should have known of the existence of the changed condition. If there is a decrease in the costs or time required to perform the work, failure of the Contractor to notify the Engineer of the changed condition shall not affect the State's right to make an adjustment in the costs or time.

#### 1-04.8 Progress Estimates and Payments

Progress estimates for work performed or payments for any portion of the work made by the Engineer will not be evidence of performance or quantities. Estimates made during progress of the work are tentative and made only for the purpose of determining quantities for partial payment. The estimates are subject to change at any time prior to final acceptance by the Secretary. The Secretary may make changes in progress estimates and in the final estimate as he deems to be proper.

#### 1-04.9 Use of Buildings or Structures

If the Contractor desires to use any building or structure on the right of way or allow any building or structure to remain during the performance of the contract, the use or existence will be at the discretion of the Engineer.

#### 1-04.10 Use of Materials Found on the Project

Upon written approval of the Engineer, the Contractor may use on the project any stone, gravel, sand, or other materials found in the required excavation, or any timbers removed in performing the work, provided that such materials satisfy the requirements of the contract and are not required for other use under the contract or as Selected Materials as required in Section 2-03.3 (10). The use of materials found on the project will not be permitted if it is to the detriment of the State.

When directed by the Engineer, materials disturbed on the work and not used by the Contractor shall be neatly piled or otherwise distributed along the right of way in areas designated by the Engineer, and shall remain the property of the State.

#### 1-04.11 Final Cleanup

The completion date will not be established for the project until the final cleanup is performed to the satisfaction of the Engineer. The highway right of way, material sites, and all ground occupied by the Contractor in connection with the work shall be left in a neat and presentable condition. The Contractor shall remove all rubbish, surplus materials, discarded materials, falsework, camp building, temporary structures, equipment, and debris. Also, all extraneous oversized rock from grading, surfacing, and paving operations shall be deposited in embankments or removed from the project.

The Contractor shall not remove warning, regulatory, and guide signs without the approval of the Engineer.

## 1-05 CONTROL OF WORK

## 1-05.1 Authority of the Engineer

The work on a contract shall be done to the complete satisfaction of the Engineer. He has the authority given to him by the contract and specifications.

The Engineer's decisions will be final and binding on the Contractor on all questions which arise regarding:

1. Quality and acceptability of materials and work;
2. Acceptable rate of progress of the work;
3. Plans and specifications interpretation;
4. The fulfillment of the contract by the Contractor; and
5. Contract compensation.

The Project Engineer represents the Engineer on the project. He has authority to enforce the terms and requirements of the contract and to carry out the Engineer's orders (with State workers, other bids, etc.) if the Contractor does not do so promptly. The State will not be obligated to pay the Contractor if decisions or orders are not carried out by the Contractor.

At the Contractor's risk, the Project Engineer has authority to suspend all or part of the work if:

1. The Contractor does not carry out the terms of the contract;
2. The Contractor does not carry out the Engineer's orders;
3. The Contractor does not correct conditions unsafe for the work, workmen, or the public;
4. The weather or other conditions are unsuitable; or
5. It is in the public interest.

Nothing in this section or elsewhere in the contract shall be construed as requiring the Engineer to direct or advise as to the method or manner of performing any work under the contract. No approval or advice as to the method or manner of performing or producing any materials to be furnished shall constitute a representation or warranty by the State that the result of such method or manner will conform to the contract, relieve the Contractor of any of his risks or obligations under the contract, or create any liability to the State because of such approval or advice.

## 1-05.2 Authority of Assistants and Inspectors

The Project Engineer may appoint assistants and inspectors to assist him in determining that the work and materials meet the contract requirements. Assistants and inspectors have the authority to reject defective material and suspend work that is being done improperly, subject to the final decisions of the Project Engineer or when appropriate the Engineer. They also have any additional authority delegated to them by the Project Engineer.

Assistants and inspectors are not authorized to accept work, to accept materials, to issue instructions, or to give advice that is contrary to the contract. Work done or material furnished which does not meet the contract requirements shall be at the Contractor's risk and shall not be a basis for a claim even if the inspectors or assistants purport to change the contract.

Assistants and inspectors may advise the Contractor of any faulty work or materials or infringements of the terms of the contract; however, failure of the Project Engineer or his assistants or inspectors to advise the Contractor does not constitute acceptance or approval.

## 1-05.3 Plans and Working Drawings

The contract plans consist of drawings that give a comprehensive idea of the work. Any proposed alterations by the Contractor affecting the requirements and information in the plans shall be in writing and will require approval of the Engineer.

To detail and illustrate the work, the Engineer may furnish to the Contractor additional plans and explanations consistent with the original plans. The Contractor shall perform the work according to these additional plans and explanations.

The Contractor shall prepare supplemental working drawings that are required for the performance of the work. These shall be on 24 inch by 36 inch sheets or on small sheets with dimensions in multiples of 8 1/2 by 11 inches.

The Contractor's supplemental working drawings shall include but not be limited to: shop details, erection plans, masonry layout diagrams, reinforcing steel bending diagrams, post tensioning, shoring, cribbing, cofferdams, falsework, or form work. The Engineer's written approval for any supplemental working drawings shall be obtained before any work is done as proposed by the supplemental working drawings.

Contractors are still fully responsible for the accuracy of dimensions and details and for complete conformity with the contract. This is true even if their working drawings are approved, or if they and the Engineer agree on dimensions and details. The State does not accept as accurate or adequate, take responsibility for, or guarantee that such drawings will meet contract requirements.

Contractors shall submit supplemental drawings and plans sufficiently in advance of the actual need. This permits the State and other reviewing agencies to review them in detail, and allows time for any rejections, revisions, and resubmittals. Contractors shall not claim compensation for work delays because supplemental drawings and plans are not approved. Any such delay is deemed to be entirely the Contractor's risk.

Unit bid prices shall include all costs of furnishing any working drawings required.

## 1-05.4 Conformity with Plans, Stakes, and Deviations Therefrom

The Contractor's work shall be governed by the lines, grades, and cross-sections provided by the Engineer in laying out and staking the work. The roadway on curves shall be super-elevated according to the data on the plans.

All work performed shall be in reasonably close conformity with the lines, grades, cross sections, data, and dimensions shown in the plans or as staked by the Engineer. Where specific tolerances are stated in the plans, special provisions, or standard specifications, the work shall be performed within those limits. The Engineer will determine if work is in reasonably close conformity, and his determination will be final.

Deviations from the approved plans and working drawings will not be permitted unless authorized in writing by the Engineer.

## 1-05.5 Construction Stakes

The Engineer will set any necessary construction stakes and marks establishing lines, slopes, and grades. The Contractor shall assume full responsibility for detailed dimensions, elevations, and excavation slopes measured from these stakes and marks.

When an automatically controlled machine is required or used to trim the subgrade using reference lines, the Engineer will set control stakes for line and grade one time only after grading has been completed. If the Engineer determines that extraordinary pavement widths or other circumstances require additional control,

he may provide additional control stakes without penalty to the Contractor. The Contractor shall set the reference lines for trimming the subgrade and surfacing and controlling the paving machine from these control stakes.

Stakes and marks shall be carefully preserved by the Contractor. The costs of any necessary replacement of stakes and marks which are carelessly or willfully destroyed or damaged by the Contractor's operation will be deducted from payments due the Contractor.

The Contractor shall provide sufficient and safe facilities for the Engineer to set points and elevations.

The Contractor shall keep the Engineer informed of his staking requirements so that a reasonable amount of time is provided for the Engineer to set the stakes. Requests for stakes shall be made at least 3 working days prior to the need to commence staking operations.

#### 1-05.6 Inspection of Work and Materials

All work done and all materials furnished are subject to inspection by the Engineer to determine if they conform with the terms of the contract. The Contractor shall furnish any necessary facilities so that the Engineer always has sufficient and safe access to the work such as walkways, railings, ladders, and platforms.

When requested by the Engineer, the Contractor shall furnish without charge samples of materials used or to be used in the construction to ensure conformance with the contract. If materials are tested and approved for a project, then used for purposes not connected with that project, the cost of testing and inspecting may be deducted from payments due the Contractor. Any materials used without inspection can be ordered removed and replaced at the Contractor's expense. The work associated with this removal and replacement shall also be at the Contractor's expense.

Inspections, tests, measurements, or other acts or functions performed by State personnel are recognized as being for the sole purpose of assisting the Engineer to determine with reasonable assurance that the work, materials, rate of progress, and quantities comply with the contract terms. These acts or functions shall not relieve the Contractor from determining to his satisfaction that he is in full compliance with contract requirements nor to relieve him from any of the responsibility for the work assigned to him by the contract. The Contractor shall correct any work or materials that do not meet the contract requirements. Unsuitable work or materials will be rejected even if the work or materials have been inspected or payments made in a progress estimate.

If requested by the Engineer, the Contractor shall remove or uncover any portions of the completed work. After examination, the Contractor shall restore these portions of the work to the standard required by the contract. If the exposed work proves to be acceptable, the State will pay for all costs associated with the uncovering, removing, and restoration by agreed price or by force account unless the work was placed without due notice to the Engineer or without authority. If the exposed work proves to be unacceptable or placed without due notice to the Engineer or without authority, all costs associated with the uncovering, removing, and restoration shall be at the Contractor's expense.

Where work is to be done on any railroad, utility, or facility of a public agency, or to the satisfaction of any federal, state, or municipal agency, their representatives

shall be permitted to inspect the work when the Contractor is advised by the Engineer to permit them to do so.

The Contractor shall furnish and install an automatic or semi-automatic mechanical sampler in connection with any crushing or screening operation. This device shall be capable of safely and conveniently obtaining representative samples of the materials being produced and conveying them to the ground in sample sacks provided by the State for delivery to the Engineer. The sampler shall be constructed and operated in such a manner that it moves at a uniform rate through the full width of the falling stream of materials from the discharge end of the belt, gate, or chute. The sampling equipment shall be power driven during the material intercept cycle. The sampler shall be adjustable so that samples of approximately 100 pounds in size may be taken as frequently as desired by the Engineer. The design and operation of the sampling equipment shall be approved by the Engineer before the acceptance of any material produced in the crushing or screening operation. The Contractor shall furnish this sampling equipment and shall reserve space and provide utilities for all sampling operations without charge to the State.

#### 1-05.7 Removal of Defective and Unauthorized Work

Work and materials which do not conform to the requirements of the contract, work done beyond lines and grades shown in the plans or established by the Engineer, and extra work and materials furnished without written approval of the Engineer will be considered unauthorized and will not be paid for by the State. Upon order of the Engineer, unauthorized work or materials immediately shall be remedied, removed, replaced, or disposed of at the Contractor's expense.

#### 1-05.8 Vacant

#### 1-05.9 Equipment

If requested by the Engineer, the Contractor shall make available operating and maintenance manuals for each model type of mixing, placing, or processing equipment prior to its use on the project. The Contractor shall also make available instruments to check the vibration rate, number of revolutions, or any other instrumentation necessary to confirm that operating functions of the equipment are in conformance with those specified.

Automatically controlled equipment may be required for certain operations under the contract. Whenever equipment is required to be operated automatically and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually for the remainder of the normal working day of the breakdown or malfunction provided the method of operation produces results otherwise meeting the specifications. Continued operation of the equipment manually beyond this working day will be permitted only by specific authorization of the Engineer.

Equipment subject to repeated breakdowns or that does not provide consistent results within specified tolerances will be rejected by the Engineer. Rejected equipment shall be replaced promptly by the Contractor. The Contractor shall have no claim for additional compensation or for extension of time due to the rejection and replacement of any equipment.

#### 1-05.10 Guarantees

The Contractor shall furnish to the State any guarantee or warranty furnished as

a normal trade practice in connection with his purchase of any equipment, materials, or items used in the construction of the project.

#### 1-05.11 Final Inspection

The Engineer will not make the final inspection until the work required by the contract, including final cleanup and all extra work ordered by the Engineer, has been completed.

#### 1-05.12 Final Acceptance

The Secretary accepts the items of work shown in the final estimate by signature of the Final Contract Voucher Certification. The date of that signature constitutes the acceptance date. Progress estimates or payments shall not be construed as acceptance of any work under the contract.

Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The State shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material.

#### 1-05.13 Superintendents, Labor, and Equipment of Contractor

The Contractor shall keep at the work site at all times a set of the plans, specifications, special provisions, and addenda. The Contractor shall give the work the attention necessary to facilitate reasonable progress and shall cooperate with the Engineer and his inspectors in every way possible.

The Contractor shall be present in person or by a duly authorized representative at the site of the work continually during its progress. The Contractor shall designate in writing before starting work a superintendent who shall be experienced, capable of understanding the contract, and able to supervise performance of the work provided in the contract. The superintendent shall have full authority to represent and act for the Contractor.

Competent supervisors experienced in the task being performed shall continuously supervise all contract work. Incompetent, careless, or negligent employees shall be immediately discharged by the Contractor upon written request of the Engineer. Failure to comply with this request shall be sufficient grounds for termination of the contract.

All machinery and equipment shall be adequate for the purposes used, kept in good workable condition, and operated by competent operators.

#### 1-05.14 Cooperation with Other Contractors

The State reserves the right to perform other and additional work, by contract or otherwise, at or near the site (including material sites) at any time by the use of other forces. Should work be underway or subsequently undertaken within or adjacent to this project, the Contractor shall cooperate with all other Contractors or other forces and conduct his work so that the operations of both suffer the least interference and delay. If there should be any disagreement between the Contractor and the State as to the manner and order of performing work, such disagreement will be resolved by the Engineer, and his determination shall be final.

If the contract gives notice of other work that may affect the work of this contract, the coordination of the work shall be taken into account by the Contractor, and any resulting costs shall be considered as included in the contract items.

#### 1-05.15 Method of Service of Notices

Any written notice to the Contractor required under these Specifications may be served on him either personally or by mailing or by delivery to his last post office address known to the Engineer.

All correspondence from the Contractor shall be directed to the Project Engineer.

## 1-06 CONTROL OF MATERIAL

## 1-06.1 Source of Supply and Quality of Materials

Promptly after the award of the contract, the Contractor shall notify the Engineer of the proposed sources of materials. This includes any fabricators such as structural steel fabricators. Approval of the Engineer is required for suppliers and fabricators before the delivery is started. The Contractor shall furnish material from other approved sources if it is found that sources of supply that have been approved do not furnish a uniform product or if the product is determined to be unacceptable.

All equipment, material, and articles incorporated in the permanent work shall be new unless otherwise specified in the special provisions or specifically approved. Only materials conforming to the requirements of these Specifications and approved by the Engineer shall be used in the work. Any of the materials proposed to be used may be inspected or tested at any time during their preparation and use. Materials that in any way become unfit shall not be used in the work even if they were previously approved.

## 1-06.2 Samples and Tests

Materials shall be delivered to the project in sufficient time and quantities to permit the Engineer to test them prior to use. Representative samples shall be submitted without charge by the Contractor, Producer, or Fabricator for examination and tests by the Engineer prior to incorporating the material in the work. Samples will be secured whenever necessary to determine the quality of the material. Unless authorized by the Engineer, samples not taken by him or in his presence will not be accepted for test.

All testing of materials by the Engineer will be according to special methods of test as set forth in the contract documents, test methods as set forth in the Washington State Department of Transportation Laboratory Manual, or according to applicable designated recognized standards of national organizations. This will apply to field tests as well as to laboratory tests.

The following will apply in the use of specifications and methods of tests of the organizations named below:

A.S.T.M. - American Society for Testing and Materials. The ASTM designation number refers to the latest adopted standard or tentative standard of this society. The standard or tentative standard in effect on the date of advertising for bids will apply in each case. Revisions will be considered as becoming effective on the first day of December in the year in which they are adopted. Copies of any separate ASTM specifications or method of test may be obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa.

A.A.S.H.T.O. - American Association of State Highway and Transportation Officials. The specifications or test method shown by number refers to the "Standard Specifications for Highway Materials and Methods of Sampling and Testing" currently published by the Association or to revisions that may have been subsequently adopted by the Association or to the "Interim Specifications and Methods adopted by the AASHTO Committee on Materials." Revisions and Interim Standards in effect on the date of advertising for bids will apply. Revisions will be considered as becoming effective 60 days after announcement of adoption is published in the "Annual

Reports of the Permanent Committees" of the Association. Interim Standards will be considered as becoming effective on the first day of July of the year following that indicated in the specification or test method designation number. Copies of "Standard Specifications for Highway Materials and Methods of Sampling and Testing" may be obtained from the American Association of State Highway and Transportation Officials, 917 National Press Building, Washington, D.C.

Federal Specification - U.S. Government Federal Stock Catalogue. The specification number refers to the latest revised specification adopted by the General Services Administration. Revisions in effect on the date of advertising for bids will apply. Revisions will be considered as becoming effective 60 days after adoption. Copies of separate specifications listed in the Federal Stock Catalogue may be obtained at the prices indicated upon application to the Business Service Center, General Services Administration, Regional Office Building, Seventh and D Streets, Washington, D.C.

Other Publications - Requirements of other publications referred to in these Specifications or the special provisions will be the latest edition of the publication, and any amendments in effect on the date of advertising for bids will apply. Requirements will be considered as becoming effective sixty days after publication. For example, copies of standard grading and dressing rules may be obtained from the West Coast Lumber Inspection Bureau, Seattle, Washington; or Portland, Oregon; and from the Western Wood Products Association, Portland, Oregon.

## 1-06.3 Vacant

## 1-06.4 Handling and Storage of Materials

All materials to be used in the work shall be handled and/or stored by the Contractor by any means necessary to prevent damage from careless handling, from exposure to the elements, from a mixture of foreign material, or from any other cause. The Engineer will refuse to accept, or to sample for testing, any materials that are improperly handled or stored.

## 1-06.5 American-Made Materials Required

Normally, the Contractor shall use American-made materials in work under the contract. The Contractor may use foreign-made materials only when the Department approves it in writing. In deciding whether to permit foreign-made materials, the Department may consider any of the questions listed below—or other questions that may apply.

1. Can the State arrange to inspect the material to its satisfaction? (Some materials may require on-site inspection during manufacture or fabrication.)
2. Does the State have personnel available to inspect the materials?
3. Would inspection require more than a reasonable investment of time and money?
4. Would use of foreign-made material delay project completion for any reason—such as extra time needed for inspection, manufacture, fabrication, or delivery?
5. How would the net cost to the State compare with the net cost if American-made materials were used? (These costs include inspection, delivery, and any

other costs that relate directly to the material.)

The Secretary's decision on whether to allow foreign-made materials shall be final.

After completing work that includes more than \$2,500.00 worth of foreign-made materials, the Contractor shall prepare a certified statement to comply with Chapter 39.25 RCW. This statement must set forth the nature and source of the materials. The Contractor shall deliver this statement to the Department of General Administration, Division of Purchasing, Room 216, General Administration Building, Olympia, Washington 98504. The Contractor shall give a copy of the statement to the Engineer.

#### 1-06.6 Sieves for Testing Purpose

Sieves for testing purposes will be woven wire cloth sieves conforming to the requirements of AASHTO Designation M 92 or ASTM Designation E 11 or square hole perforated plates conforming to ASTM Designation E 323.

### 1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

#### 1-07.1 Laws to be Observed

The Contractor shall always comply with all laws, ordinances, and regulations—Federal, State, or local—that affect work under the contract. The Contractor shall indemnify and save harmless the State (including the Commission, the Secretary, and any agents, officers, and employees) against any claims that may arise because the Contractor (or any employee or subcontractor) violated a legal requirement.

The Contractor shall be responsible for the safety of his workers and shall comply with safety and health standards such as Safety Standards for Construction Work (Chapter 296-155 WAC), General Safety and Health Standards (Chapter 296-24 WAC), General Occupational Health Standard (Chapter 296-62 WAC), and any other appropriate safety and health codes.

U.S. Mine Safety and Health Administration rules apply when the project includes pit or quarry operations. Among other actions, these regulations require the Contractor to notify the nearest Mine Safety and Health subdistrict office (1) of the project before it begins, (2) of the starting date, and (3) of the completion date. The Contractor shall send the Project Engineer a copy of each report.

Without usurping the authority of other agencies, the Department will cooperate with them in their efforts to enforce legal requirements. On noticing any serious violation of a legal requirement, the Engineer will notify the Contractor and the agency responsible for enforcement. The Engineer will also help the agency obtain Contractor compliance to the extent such help is consistent with the contract.

**Changes in Laws.** The State will not adjust payment to compensate the Contractor for changes in legal requirements unless those changes are specifically within the scope of RCW 39.04.120. For changes under RCW 39.04.120, the State will compensate the Contractor by negotiated change order or by force account.

**Changes in Taxes.** Under certain conditions, the State will adjust payment to compensate for tax changes. First, the changes shall involve federal or state taxes on materials used in or consumed for the project. Second, the changes shall increase Contractor-paid taxes by more than \$100. For items in the original contract, the tax change must occur after the bid opening date. For negotiated contracts or items in a supplemental agreement, the tax change must take place after the execution date of the contract or agreement. Within these conditions, the State will adjust compensation by the actual dollar amounts of increase or decrease caused by the tax changes.

If the Engineer requests it, the Contractor shall certify in writing that the contract price does not include any extra amount to cover a possible change in taxes. The State may audit the records of the Contractor to verify any claim for compensation because of changes in laws or taxes.

#### 1-07.2 State Taxes

The Washington State Department of Revenue has issued special rules on the state sales tax. Sections 1-07.2(1) through 1-07.2(3) of these Specifications are meant to clarify those rules. The Contractor should contact the Financial Manager, Department of Transportation, Olympia, for answers to questions in this area. The State will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or

other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Department will pay the retained percentage only if the Contractor has obtained from the State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.050). The State may deduct from its payments to the Contractor any amount the Contractor may owe the State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

#### 1-07.2(1) State Sales Tax: Work Performed on Non-State Land

State Department of Revenue Rule 171 and its related rules apply for this section. The special provisions of the contract will identify those parts of the project that require work on land owned by:

1. a municipal corporation,
2. a political subdivision of the State, or
3. the United States of America.

For work performed on such land, the Contractor shall include Washington State retail sales taxes in the various unit bid prices or other contract amounts. These retail sales taxes shall include those the Contractor pays on purchases of materials, equipment, and supplies used or consumed in doing the work.

#### 1-07.2(2) State Sales Tax: Work on State-Owned Land

State Department of Revenue Rule 170 and its related rules apply for this section. The special provisions of the contract will identify those parts of the project that require work on State-owned land.

For work performed on State-owned land, the Contractor shall collect from the State retail sales tax on the full contract price. The Department will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid prices or in any other contract amount.

However, the Department will not add in sales tax the Contractor (prime or subcontractor) pays on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid prices or in any other contract amount whether the State owns the construction site or not.

#### 1-07.2(3) Services

The Contractor shall not collect retail sales tax from the State on any contract wholly for professional or other services (as defined in State Department of Revenue Rules 138 and 224).

#### 1-07.3 Forest Protection

The Contractor shall acquaint himself with and obey all applicable laws and/or regulations (Federal and State) for fire prevention and sanitation when work is performed in or adjacent to State or Federal forest areas. He shall consult with the local forest supervisor or warden for any required permits, sanitation requirements, fire fighting equipment, and burning regulations. The Contractor shall be responsible for strict observance of any of these laws and regulations.

When merchantable timber is to be cut, the Contractor shall obtain a permit

from the nearest State Warden and comply with the State Forest Practices Act in every way.

The Contractor shall take all reasonable precautions to prevent and suppress forest fires, and shall require his employees and those of any subcontractor to work under the direction of the forest officials when necessary to accomplish this. He shall immediately notify the nearest forest headquarters of any forest fire and its exact location, and do all in his power to suppress it.

#### 1-07.4 Sanitation

The Contractor shall provide and maintain in a clean, neat, and sanitary condition any accommodations for his employees that are necessary to comply with the requirements and regulations of the State Department of Social and Health Services and other agencies. The Contractor shall commit no public nuisance, keep all camp sites clean, burn or otherwise dispose of all refuse in a proper manner, and leave the premises in a neat and sanitary condition.

#### 1-07.5 Game, Fisheries and Ecology Regulations

The Contractor shall comply with all rules of the State Departments of Game, Fisheries, and Ecology in force during the work. Some (though not all) of these rules are summarized below. Each Department may add other restrictions as needed to protect fish and to prevent air or water pollution, all without any prejudice to the State.

##### State Departments of Game and Fisheries

In doing the work, the Contractor shall:

1. Not degrade water quality in a way that would harm fish. (The Washington State Water Quality Regulations will serve as water quality criteria for the project.);
2. Release into a flowing stream or open water any fish stranded by the project;
3. Replant any stream bank or shoreline areas if the project has disturbed the vegetative cover. (Any trees, brush, and grasses used in replanting shall resemble the type and concentration of surrounding vegetation, unless the special provisions permit otherwise.);
4. Provide an open water channel at the lowest level of any isolated pothole remaining when the work is complete;
5. Protect fish by preventing harmful siltation on the bed or bottom of any body of water;
6. Never block stream flow or fish passage;
7. Keep all equipment out of any flowing stream or other body of water (except as the special provisions may permit);
8. Never remove gravel or other bottom material from within the high-water flow channel bed of any stream nor from the bottom of any other body of water. (The special provisions may permit exceptions here.); and
9. Dispose of any project debris by removing it, burning it, or placing it beyond high-water flows.

If work in 1 through 3 above differs little from that specified in the contract, the Department will measure and pay for it at unit contract prices. If work in those areas is not covered by contract items, the Department will pay by agreed price or force account. Work in 4 through 9 above will be incidental to contract pay items.

##### State Department of Ecology

In doing the work, the Contractor shall:

1. Obtain a waste discharge permit from the Ecology Department before:
  - a. Washing aggregate, and
  - b. Discharging into a ground or surface waterway, water from pit sites or excavations, when the water contains turbidity, silt, or foreign materials;
2. Provide the Project Engineer with a copy of each waste discharge permit before starting the work;
3. Control drainage and erosion to minimize the pollution of any waterway;
4. Dispose of all toxicants (including creosote, oil, cement, concrete, and water used to wash equipment) in ways that will prevent them from entering State waters; and
5. Dispose of all debris, overburden, and other waste materials in ways that will prevent them from entering State waters.

#### Air Quality

The Contractor shall comply with all rules of local air pollution authorities or, where no local authorities exist, with air quality rules of the State Department of Ecology.

#### 1-07.6 Permits and Licenses

Contractors shall obtain all permits and licenses required to complete the work. They shall also give notice as the permits and licenses may require.

The Department will allow the Contractor to obtain a temporary operational permit in its name and will support efforts to obtain it if:

1. A local ordinance or controlling agency policy will not allow issuance of a permit to a private firm,
2. The Contractor takes all action to obtain the permit,
3. Such a permit will serve the public interest,
4. The permit applies only to work under the current contract,
5. The Contractor agrees in writing to comply with all that the issuing agency requires,
6. The Contractor agrees in writing to hold the State harmless for any work-related liability incurred under the permit, and
7. The permit costs the State nothing.

#### 1-07.7 Load Limits

While moving equipment and materials on any public highway, the Contractor shall comply with any law that controls traffic or limits loads. The contractor does not exempt the Contractor from such laws nor does it license overloads. At the Engineer's request, the Contractor shall provide any information needed to determine the weight of equipment on the roadway.

When the Contractor moves equipment or materials within the project boundaries, legal load limits shall apply on:

1. Any road open to and in use by public traffic,
2. Any existing road not scheduled for major reconstruction under the current contract, and
3. Any newly paved road (with its final lift in place) built under this contract. The Contractor may haul overloads (not exceeding 25 percent) on such roads not open to public traffic if this does not damage completed work. Should damage occur, the Contractor shall pay all repair costs.

On all other parts of the project, the Contractor may operate equipment without load-limit restrictions except as described in items 1, 2, and 3 below. In doing so, however, the Contractor remains responsible for any damage that may result. All vehicles subject to license on a tonnage basis will be required to license to the maximum legal capacity before being eligible to operate under the weight limitations described in item 1, 2, or 3 below.

The Engineer may approve higher load limits in items 1, 2, or 3 below if it is necessary and safe to do so. To obtain such approval, the Contractor shall request it from the Engineer in writing. The request shall describe in detail the loading, configuration, and movement or position of the equipment on the structure or over the culverts and pipes. The request shall state that the Contractor assumes all risk for damages. The Contractor shall include in the unit prices all costs for operating over bridges or culverts. Nothing in this section affects the Contractor's other responsibilities under these Specifications or under public highway laws.

1. Structures Designed for Direct Bearing of Live Loads. On these structures, the gross or maximum load on each individual vehicle axle shall not exceed the legal load limit by more than 35 percent. No more than one vehicle shall operate over any structure at one time.

The Contractor shall immediately remove any dirt, rock, or debris that may accumulate on the structure's roadway surface.

#### 2. Underpasses and Reinforced Concrete Box Culverts Under Embankments.

Over these structures, maximum loads shall be 24,000 pounds on a single axle and 17,000 pounds each on tandem axles spaced less than 10 feet apart, provided that:

- A. The embankment has been built to specifications, and
- B. The embankment has reached at least 3 feet above the top of the underpass or culvert.

When the embankment has reached 5 feet above the top of the culvert or underpass, the Contractor may increase axle loads up to 100,000 pounds each if outside wheel spacing is at least 7 feet on centers on the axle.

3. Pipe Culverts and Sewer Pipes. Over pipe culverts and sewer pipes, maximum loads shall be 24,000 pounds on a single axle and 16,000 pounds each on tandem axles spaced less than 10 feet apart, provided that:

- A. The culvert or pipe has been installed and backfilled to specifications, and
- B. The embankment has reached at least 2 feet above the top limit of pipe compaction as defined in Design A or Design C.

When the embankment has reached 5 feet above the top limit of pipe compaction, the Contractor may increase axle loads up to 100,000 pounds each if outside wheel spacing is at least 7 feet on centers on the axle—except that:

- A. For Class III reinforced concrete pipes, the embankment shall rise above the top limit of compaction at least: (a) 6 feet for Design A work, and (b) 7 feet for Design C work.
- B. For Class II reinforced concrete pipes, the maximum load for each axle shall be 80,000 pounds if outside wheel spacing is at least 7 feet on centers on the axle. In this case, the embankment shall rise above the top limit of compaction at least: (a) 6 feet for Design A work and (b) 10 feet for Design C work.

#### 1-07.8 Vacant

**1-07.9 Wages**

This contract is subject to the minimum wage requirements of RCW 39.12 and to RCW 49.28 (as amended or supplemented). On Federal Aid projects, Federal wage laws and rules also apply. The contract lists hourly minimum rates for wages and fringe benefits. When the contract lists Federal wage and fringe benefit rates, the rates match those identified by the U.S. Department of Labor's "Decision Number" shown in the special provisions.

The Contractor, any subcontractor, or other person doing any work under the contract shall not pay any worker less than the minimum hourly wage rates and fringe benefits shown in the contract. Higher wages and benefits may be paid.

By including wage and fringe benefit rates in the contract, the State does not imply that the Contractor will find labor available at those rates. The Contractor shall calculate any amounts above the minimums he will actually have to pay. Further, rates for wages and fringe benefits may change while the contract is in force. If they do, the Contractor shall bear the cost of paying rates above those shown in the contract.

When the project is subject to both State and Federal wage rates and when the two rates differ for similar kinds of labor, the Contractor shall not pay less than the higher rate.

If employing labor in a class not listed in the special provisions, the Contractor shall request the Industrial Statistician (Department of Labor and Industries) to determine the correct wage rate for that class and locality.

**Posting Notices.** In a location acceptable to the Department of Labor and Industries, the Contractor shall post:

1. One copy of the approved "Statement of Intent to Pay Prevailing Wages,"
2. One copy of the prevailing wage rates for the project, and
3. The address and telephone number of the Industrial Statistician for the Department of Labor and Industries (along with notice that complaints or questions about wage rates may be directed there).

**Apprentices.** If employing apprentices, the Contractor shall submit to the Engineer written evidence showing:

1. Each apprentice is enrolled in a program approved by the State Apprenticeship Council,
2. The progression schedule for each apprentice, and
3. The established apprentice-journeyman ratios and wage rates in the project locality upon which the Contractor will base such ratios and rates under the contract.

**Disputes.** If labor and management cannot agree in a dispute over the proper prevailing wage rates, the Contractor shall refer the matter to the Director of the Department of Labor and Industries (or to the U.S. Secretary of Labor when that agency sets the rates). The Director's (or Secretary's) decision shall be final, conclusive, and binding on all parties.

**Required Documents.** On forms the Engineer provides, the Contractor, subcontractors, and agents shall submit to the Department:

1. A "Statement of Intent to Pay Prevailing Wages." The State will make no payment under this contract until this statement has been completed.
2. An "Affidavit of Wages Paid," with the Final Contract Voucher Certification. This affidavit certifies all prevailing wage requirements have been met.

In addition, the Prime Contractor shall submit a "Request for Release" to the Department of Labor and Industries. That agency provides the form.

The State will not release to the Contractor any funds retained under RCW 60.28.010 until the "Affidavit for Wages Paid" and the "Request for Release" forms have been completed and submitted.

If using the occupation code for wage affidavits and payrolls, and if the project involves more than one jurisdictional area, the Contractor shall reference the area just after the occupation code number. For example: 10-0010 Yak.E.

**Audits.** The Department may inspect or audit the Contractor's wage and payroll records at any time while the contract is in force and up to three years after its acceptance date. The Contractor shall maintain such records for that period. The Contractor shall also guarantee that wage and payroll records of all his subcontractors and agents shall be open to similar inspection and auditing for the same period of time. The Department will give the Contractor reasonable notice of the starting date if an audit will begin more than 60 days after the contract acceptance date.

**1-07.10 Workmen's Benefits**

The Contractor shall make all payments required for unemployment compensation under Title 50 RCW and for industrial insurance and medical aid required under Title 51 RCW. The Contractor shall also obey all State and local laws, ordinances, and regulations establishing safety standards for the protection of employees.

If any payment required by Title 50 or Title 51 is not made when due, the State may retain such payments from any money due the Contractor and pay the same into the appropriate fund.

The Public Works Contract Division of the Department of Labor and Industries will provide the Contractor with applicable industrial insurance and medical aid classification and premium rates. The "Request for Release" form of the Department of Labor and Industries (Section 1-07.9) is also for the purpose of obtaining a release with respect to the payments of industrial insurance and medical aid premiums.

**1-07.11 Equal Employment Opportunity Responsibilities**

The Contractor shall comply with all State laws and regulations which are in effect pertaining to non-discrimination, and in addition, on contracts financed in whole or in part with Federal funds, he shall comply with all Federal laws and regulations which are in effect.

When specified in the contract, the equal employment opportunity requirements listed in Sections 1-07.11(1) through 1-07.11(10) not to discriminate and to take affirmative action to ensure equal employment opportunity will be required, and the requirements set forth in these Specifications shall constitute the specific affirmative action requirements for project activities under the contract. The Contractor shall work with the State Department of Transportation, and the Federal Government on Federal Aid projects, in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

**1-07.11(1) General**

The Contractor and all his/her subcontractors (not including material suppliers) holding subcontracts of \$10,000 or more shall comply with the following minimum specific requirement activities of equal employment opportunity. The Contractor

shall include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

1-07.11(2) Equal Employment Opportunity Policy

The Contractor shall accept as his/her operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

1-07.11(3) Equal Employment Opportunity Officer

The Contractor shall designate and make known to the State Department of Transportation contracting officers an Equal Employment Opportunity Officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

1-07.11(4) Dissemination of Policy

All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, shall be made fully cognizant of, and shall implement the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions shall be taken as a minimum:

Periodic meetings of supervisory and personnel office employees shall be conducted before the start of work and then not less often than once every 6 months, at which time the Contractor's equal employment opportunity policy and its implementation shall be reviewed and explained. The meetings shall be conducted by the EEO Officer or other knowledgeable company official.

All new supervisory or personnel office employees shall be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within 30 days following their reporting for duty with the Contractor.

All personnel who are engaged in direct recruitment for the project shall be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority group employees.

In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement

officers, etc., the Contractor shall take the following actions:

Notices and posters setting forth the Contractor's equal employment opportunity policy shall be placed in areas readily accessible to employees, applicants for employment, and potential employees.

The Contractor's equal employment opportunity policy and the procedures to implement such policy shall be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

1-07.11(5) Recruitment

When advertising for employees, the Contractor shall include in all advertisement for employees the notation: "An Equal Opportunity Employer." All such advertisements shall be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

The Contractor shall, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the Contractor shall, through his/her EEO Officer, identify sources of potential minority group employees and establish with such identified sources procedures whereby minority group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended.)

The Contractor shall encourage his/her present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants shall be discussed with employees.

1-07.11(6) Personnel Actions

Wages, working conditions, and employee benefits shall be established and administered; and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed:

The Contractor shall conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

The Contractor shall periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

The Contractor shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor shall promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed,

such corrective action shall include all affected persons.

The Contractor shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with his/her obligations under this contract, shall attempt to resolve such complaints, and shall take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation the Contractor shall inform every complainant of all of his/her avenues of appeal.

**1-07.11(7) Training and Promotion**

The Contractor shall assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.

Consistent with the Contractor's workforce requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs; i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance.

When the bid proposal includes a pay item for training, a part of the Contractor's equal employment opportunity affirmative action program shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade involved. The number of trainees to be trained under the contract will be specified in the special provisions. In the event the Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this provision. The Contractor shall also ensure that this Training Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him/her on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor shall be responsible for demonstrating the steps that he/she has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance

with this Training Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records shall document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State Department of Transportation and the Federal Highway Administration. The State Department of Transportation and the Federal Highway Administration will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower administration, Bureau of Apprenticeship and Training will also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. The Contractor's complete written training program shall be submitted to the Engineer at the preconstruction conference. Subsequent revisions to the training program shall also be submitted to the Engineer as changes occur. The training program shall contain the trade or trades proposed to accomplish the training item in the contract, the number of trainees and hours assigned to the trade, and the estimated begin work date for the trainee. A detailed breakdown of the hours assigned to the various skills of the trade must be submitted for other than apprenticeship trades. Approval or acceptance of the Contractor's training program shall be obtained from the Engineer prior to commencing the trainee's work covered by the program. After approval of the training program, documentation concerning each individual trainee shall be submitted as requested by the Engineer. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved.

Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted hereinafter, the Contractor will be reimbursed under the item "Training" per hour for each hour of training for each employee that is trained in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training persons in excess of the number specified herein. Reimbursement will be made on the monthly progress estimate

upon receipt of a certified invoice that shows the related weekly payroll number, the name of trainee, total hours trained under the program, previously paid hours under the contract, hours due this estimate, and the dollar amount due this estimate. The certified invoice shall show a statement indicating the Contractor's effort to enroll minorities and women when a new enrollment occurs. When an apprentice is first enrolled, copies of the certificate showing apprenticeship registration must accompany the invoice. Reimbursement for apprenticeship training occurring prior to approval of the training program will be allowed if the Contractor verbally notifies the Engineer of this occurrence at the time the apprentice commences work. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor when he/she does one or more of the following and the trainees are concurrently employed on a Federal-aid project: contributes to the cost of the training, provides the instruction to the trainee, or pays the trainee's wages during the offsite training period.

No payment will be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this training provision. It is normally expected that a trainee will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or until the completion of the training program. It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his/her responsibilities under this training provision if he/she has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least the applicable ratios or wage progressions shown in the apprenticeship standards published by the Washington State Department of Labor and Industries. In the event that no training program has been established by the Department of Labor and Industries, the trainee shall be paid in accordance with the provisions of RCW 39.12.021 which reads as follows:

Apprentice workmen employed upon public works projects for whom an apprenticeship agreement has been registered and approved with the State Apprenticeship Council pursuant to chapter 49.04 RCW, must be paid at least the prevailing hourly rate for an apprentice of that trade. Any workman for whom an apprenticeship agreement has not been registered and approved by the State Apprenticeship Council shall be considered to be a fully qualified journeyman, and, therefore, shall be paid at the prevailing hourly rate for journeymen.

The Contractor shall furnish the trainee a copy of the program he/she will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting his/her performance under this Training Provision.

The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements for each.

The Contractor shall periodically review the training and promotion potential of minority group and women employees and shall encourage eligible employees to apply for such training and promotion.

#### 1-07.11(8) Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor shall use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and effect referrals by such unions of minority and female employees. Actions by the Contractor either directly or through a contractor's association acting as agent shall include the procedures set forth below:

The Contractor shall use his/her best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

The Contractor shall use his/her best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

The Contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the Department of Transportation and shall set forth what efforts have been made to obtain such information.

In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the Contractor shall, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified and/or qualified minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, and 23 CFR Part 230 as amended, and the standard specifications, such Contractor shall immediately notify the State Department of Transportation.

#### 1-07.11(9) Subcontracting

The Contractor shall use his/her best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State Department of Transportation personnel.

The Contractor shall use his/her best efforts to assure subcontractor compliance with their equal employment opportunity obligations.

1-07.11(10) Records and Reports

Contractor shall keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor shall be designated to indicate:

The number of minority and non-minority group members and women employed in each work classification on the project.

The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force).

The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees.

The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.

All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State Department of Transportation, and on Federal Aid projects, the Federal Highway Administration.

The Contractor shall submit to the State Department of Transportation an annual report for each month of July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR 1391 by July 31. On Federal Aid contracts of \$10,000.00 or more, the Contractor and all Subcontractors shall submit a copy of OFCCP form CC 257 to the Project Engineer by the fifth of each month during the term of the contract.

If on-the-job training is required, the Contractor shall furnish form FHWA 1409 by July 20th and January 20th.

1-07.12 Federal Agency Inspection

Federal laws, rules, and regulations shall be observed by the Contractor on Federal Aid projects. This work is subject to inspection by the appropriate Federal agency. The Contractor shall cooperate with the Federal agencies in these inspections. These inspections shall not make the Federal Government a party to the contract and shall not constitute an interference with the rights of the State or the Contractor.

1-07.13 Contractor's Responsibility For Work

All work and material for the contract, including any extra work, shall be at the sole risk of the Contractor until the entire improvement has been accepted by the Secretary of Transportation, except as provided in this section. Any damage to either permanent or temporary work, utilities, materials, or equipment and plant shall be repaired to the satisfaction of the Engineer at the Contractor's expense, regardless of the cause of damage.

Exceptions to the above provision shall be limited exclusively to the following:

1. Any part of the permanent work performed by the Contractor which is damaged by earthquake or flood or other act of God, or by slides in cases where Section 2.03.3(11) is applicable; Provided, however, that this exception shall not apply should damages be by reason of the Contractor's failure to take reasonable precautions or to exercise sound engineering and construction

practices in his conduct of the work.

2. Third party damage or vandalism involving any section of roadway completed to a fully functional stage or any contract proposal item of the permanent work which is totally completed and functional and which is located on section(s) of roadway that are open to public traffic under one or more of the following circumstances:

- a. When the contract requires that the roadway(s) be opened or kept open to traffic.

- b. When the roadway(s) have been opened to traffic under the provisions of Section 1-07.25.

- c. When the State has assumed responsibility for maintenance of the roadway(s) during suspension of work as provided for by Section 1-08.7.

In order to qualify for relief from responsibility under this exception, the Contractor shall submit a written request to the Engineer. Oral notice shall not constitute adequate notification. A written request will not be considered when completion of the contract is anticipated to occur within 30 days. Relief will not be granted unless it is determined that the contract item(s) are complete, functional, and acceptable.

3. Any bridge or viaduct that has been completed in its entirety with bridge approach embankments thereto, if any, having been completed up to subgrade and all work having been completed over and under such structure, which is damaged as a result of any cause. This exception shall be effective only after requested in writing by the Contractor for specific structures and approved in writing by the Secretary of Transportation.

4. Any building that has been completed in its entirety, is fully functional, and is open to public use for which constructed in compliance with contract provisions or by order of the Engineer which is damaged as a result of public use or vandalism.

5. Any temporary work such as detours, detour structures, temporary illumination, or temporary traffic control devices which is damaged as a result of vandalism or third party damage or under the conditions specified in Item 1 above, subject to the following additional limitations:

- a. The temporary work shall have been constructed in full conformance to design and location details prepared by the State and included in the plans; and

- b. Damage shall have occurred during a time when the temporary work was fully functional and open to or serving public traffic in conformance with the contract provisions.

Damage qualifying under the exceptions listed above shall be repaired promptly as ordered by the Engineer, and compensation therefor shall be made at applicable unit contract prices. Should unit prices be determined by the Engineer as not being applicable, payment shall be made by agreed price or by force account. Where public safety is affected, the Engineer may elect to accomplish repair by means of State provided forces.

Nothing contained in this section shall be construed as relieving the Contractor of responsibility for, or damage resulting from, the Contractor's own operations or from his negligence, nor shall the Contractor be relieved from full responsibility for making good any defective work or materials as provided for under Section 1-05.

1-07.14 Responsibility For Damage

The State, Commission, Secretary, and all officers and employees of the State, including but not limited to those of the Department, will not be responsible in any manner: for any loss or damage that may happen to the work or any part; for any loss of material or damage to any of the materials or other things used or employed in the performance of work; for injury to or death of any persons, either workmen or the public; or for damage to the public for any cause which might have been prevented by the Contractor, or his workmen, or anyone employed by him.

The Contractor shall be responsible for any liability imposed by law for injuries to, or the death of, any persons or damages to property resulting from any cause whatsoever during his performance of the work, or before final acceptance.

The Contractor shall indemnify and save harmless the State, Commission, Secretary, and all officers and employees of the State from all claims, suits, or actions brought for injuries to, or death of, any persons or damages resulting from construction of the work or in consequence of any negligence regarding the work, the use of any improper materials in the work, caused in whole or in part by any act or omission by the Contractor or his agents or employees during performance or at any time before final acceptance. In addition to any remedy authorized by law, the State may retain so much of the money due the Contractor as deemed necessary by the Secretary to assure indemnification until disposition has been made of such suits or claims.

The Contractor shall indemnify and save harmless any county, city, or district, its officers, and employees connected with the work, within the limits of which county, city, or district the work is being performed, all in the same manner and to the same extent as provided above for the protection of the State, its officers and employees, provided that no retention of money due the Contractor be made by the State except as provided in Chapter 60.28 RCW, pending disposition of suits or claims for damages brought against the county, city, or district.

The Contractor shall bear sole responsibility for damage to completed portions of the project and to property located off the project caused by erosion, siltation, run-off, or other related items during the construction of the project. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, ground water, or other waters which may occur as a result of construction operations.

The Contractor shall exercise all necessary precaution throughout the life of the project to prevent pollution, erosion, siltation, and damage to property.

In order to effectively control pollution, erosion, run-off, and related damage, the Contractor may have to perform items of temporary work including, but not limited to, the following:

- Construct ditches, berms, culverts, etc., to control surface water.
- Construct dams, settling basins, energy dissipators, etc., to control downstream flows.
- Provide means of controlling underground water which may be encountered during construction.
- Protect slopes by covering or by other means until permanent erosion control measures are effective.

When the temporary control facilities are no longer needed, they shall be removed and the areas finished as directed by the Engineer.

In the event that a suspension of work is ordered for an extended period of time,

in accordance with Section 1-08.6, the Contractor shall take all action necessary to control erosion, pollution, and run-off during the shutdown period before the State will assume responsibility for maintenance. The State's responsibility will be as set forth in Section 1-08.7.

Payment for temporary control measures shall be as specified in Section 1-07.15. Erosion control items which are a part of the contract shall be considered as permanent control measures, and payment will be made at the unit contract prices involved.

Should rutting and erosion of the slope occur because of natural elements, the Contractor shall be responsible for restoring and repairing the slopes and for cleanup of eroded material including that in ditches and culverts and replacement of the material on the slopes where practicable. When additional or different materials are required as ordered by the Engineer, the necessary quantities of material will be measured and paid for at unit contract prices.

1-07.15 Temporary Water Pollution/Erosion Control

Temporary water pollution/erosion control work shall consist of temporary measures which may be shown in the plans, specified in the special provisions, proposed by the Contractor and approved by the Engineer, or ordered by the Engineer during the life of the contract. This work is intended to provide prevention, control, and abatement of water pollution/erosion within the limits of the project, and to minimize damage to the work, adjacent property, streams, and other bodies of water.

The Contractor shall coordinate this temporary water pollution/erosion control work with the permanent drainage and erosion control work that may be specified in the contract to the extent practicable to ensure that effective and continuous water pollution/erosion control is maintained during the construction of the project.

Before starting any work on the project, the Contractor shall submit to the Engineer for approval an effective temporary water pollution/erosion control plan. The plan shall show the scheduling for the erosion work that may be included in the contract and for the temporary erosion control measures which the Contractor proposes to take to prevent water pollution/erosion due to his operations upon areas within the limits of the project, State-provided sources, State-provided disposal sites, State-provided haul roads, and upon adjacent property, streams, and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Engineer, until the plan has been approved. The Contractor shall revise and bring the plan up to date at any time the Engineer makes written request for revisions.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised water pollution/erosion control plan, nor for any delays to the work due to the Contractor's failure to submit an acceptable plan. The Contractor shall allow not less than 5 working days for the review of any submitted or revised plan.

If the Engineer determines that water pollution/erosion is likely to be a problem, clearing and grubbing operations shall be so scheduled and performed that grading operations and permanent erosion control features can follow immediately. If the project conditions do not permit this scheduling, temporary water pollution/erosion control measures will be required between successive construction stages.

The area of excavation, borrow, and embankment operations in progress will be

limited commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other permanent erosion control measures current according to the accepted schedule. If the Engineer determines that water pollution and/or erosion could occur due to seasonal limitations, the nature of the material, or the Contractor's progress, temporary water pollution/erosion control measures shall be taken immediately. The Engineer may require the Contractor's operations to be scheduled so that permanent erosion control features will be installed concurrently with or immediately following grading operations.

Under no conditions shall the amount of surface area of erodible earth material exposed at one time by clearing and grubbing, excavation, borrow, or fill within the right of way exceed 750,000 square feet without prior approval by the Engineer.

The Engineer may increase or decrease the amount of surface area of erodible earth material to be exposed at one time by clearing and grubbing, excavation, borrow, and fill operations as determined by his analysis of project conditions.

Compliance with the requirements of this section shall not relieve the Contractor from his responsibility to comply with other provisions of the contract.

Temporary water pollution/erosion control work performed according to the approved plan or ordered by the Engineer will be paid for as follows:

Work which does not differ materially from specified contract work shall be measured and paid for at unit contract prices.

Work not covered by contract items will be paid for on a force account basis (Section 1-09.6).

For the purpose of providing a common proposal for all bidders, and for that purpose only, the State has estimated the cost of "Temporary Water Pollution/Erosion Control" and has arbitrarily entered the amount in the proposal to become a part of the total bid by the Contractor.

Temporary water pollution control required in Contractor-provided sources of materials, disposal sites, and haul roads will be the Contractor's responsibility. All costs for that work shall be considered incidental to and included in the various unit prices for materials obtained from or hauled to Contractor-provided sites.

#### 1-07.16 Protection and Restoration of Property

**Private/Public Property.** The Contractor shall protect private or public property on or in the vicinity of the work site. He shall ensure that it is not removed, damaged, destroyed, or prevented from being used unless the contract so specifies.

Property includes land, utilities, trees, landscaping, improvements legally on the right-of-way, markers, monuments, buildings, structures, pipe, conduit, sewer or water lines, signs, and other property of all description whether shown on the plans or not.

If the Engineer requests in writing, or if otherwise necessary, the Contractor shall at his expense install protection, acceptable to the Engineer, for property such as that listed in the previous paragraph. The Contractor is responsible for locating all property that is subject to damage by his operation.

If the Contractor (or his agents/employees) damage, destroy, or interfere with the use of such property, he shall restore it to original condition at his expense. He shall also halt any interference with the property's use. The Engineer may have such property restored by other means and subtract the cost from money that will be or is due the Contractor if he refuses or does not respond immediately.

*The Contractor shall be responsible for any other reason related to the Contractor's*

operation, a tree is destroyed, seriously damaged, or disfigured that was not ordered removed, the Contractor shall replace it with approved nursery stock of the same species. In addition to replacement, the Contractor will be assessed any appropriate liquidated damages as described below. The assessment will be deducted from monies due the Contractor.

For nonmerchantable timber, the Contractor will be assessed liquidated damages of \$10 for each inch of difference in circumference when a replacement tree is smaller than the original.

For merchantable timber, the Contractor will be assessed liquidated damages either \$10 for each circumferential inch or the estimated market value delivered at a mill, whichever is the larger amount.

The Engineer will measure circumference 12 inches above ground level. The replanting shall be according to Section 8-02 and during the first fall or spring planting period after damage, or as the Engineer directs.

**Fences, Mailboxes, Incidentals.** The Contractor shall maintain at his expense any temporary fencing to preserve livestock, crops, or property when working through or by private property. He is liable for all damages if he does not comply with this requirement.

When it is necessary to temporarily move existing mail or paper boxes, their usefulness shall not be impaired. The boxes shall be reinstalled at the original location or at locations ordered by the Engineer. New supports or boxes will not be required unless damaged by the Contractor. Any damage caused by the Contractor shall be at his expense for replacement or repairs.

**Payment.** All costs for the protection and repair specified in this section are incidental to the contract. The Contractor shall include all related costs in the unit bid prices of the contract.

#### 1-07.17 Utilities and Similar Facilities

The Contractor shall protect from damage private and public utilities, including telephone and telegraph lines, power lines, sewer and water lines, railroad tracks and appurtenances, highway lighting and signal systems, and similar facilities.

Removal or relocation of utilities and similar facilities, where necessary to accommodate the highway improvement, will be provided for in the contract, with the work being done by either the Contractor or the owner of the facility.

When the owner is responsible for removing or relocating the facilities, it is anticipated that this will be accomplished in advance of construction. If the Contractor notes the presence of any such facility, he shall immediately notify the Engineer in writing.

The right is reserved to the Department and the owners of facilities, or their authorized agents, to enter upon the highway right of way for the purpose of making changes as are necessary for the rearrangement of their facilities or for making necessary connections or repairs. The Contractor shall cooperate with forces engaged in this work and shall conduct his operations in such a manner to avoid any unnecessary delay or hindrance to the work being performed by other forces. Wherever necessary, the Contractor's work shall be coordinated with the rearrangement of utility or other facilities, and the Contractor shall make arrangements with the owner of the facilities for the coordination of the work.

Should the Contractor desire to have any rearrangements made in any utility facility, or other improvement, for his convenience in order to facilitate his

construction operations, and rearrangement is in addition to or different from the rearrangements indicated in the plans or the special provisions, he shall make whatever arrangements are necessary with the owners of the utility or other non-highway facility for such rearrangement and bear all expenses in connection to that work.

Attention is directed to the possible existence of underground facilities which are not shown in the plans or special provisions. When the relocation of these facilities are necessary to accommodate the highway improvement, the Engineer will provide for the relocations of these facilities by other forces, or the relocations shall be performed by the Contractor pursuant to written authorization and will be paid for by applicable unit prices, agreed price, or as force account.

All costs incurred as a result of performance of the Contractor's obligations in this section shall be incidental to the contract and included in the unit prices. Any loss of time suffered by the Contractor due to delay in removal or relocation of any facilities by others will be adjusted in accordance with Section 1-08.8 permitting extensions of time.

#### 1-07.18 Public Liability and Property Damage Insurance

The Contractor shall obtain and keep in force during the term of the contract, public liability and property damage insurance with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW.

The State shall be specifically named as an insured in a policy with the same company which insures the Contractor or by an endorsement to an existing policy in the following form:

##### 1. COVERAGE A - BODILY INJURY (INCLUDING DEATH) LIABILITY

##### COVERAGE B - PROPERTY DAMAGE LIABILITY

The company will pay on behalf of the Insured all sums which the Insured shall become legally obligated to pay as damages because of

Coverage A. Bodily Injury (Including Death) or

Coverage B. Property Damage

to which this endorsement applies, caused by an occurrence and arising out of (1) operations performed in relation to contract No. .... for the insured by the Contractor or its subcontractors, or (2) acts or omissions of the insured in connection with the performance of contract No. ....; and the company shall have the right and duty to defend any suit against the insured seeking damages on account of such Bodily Injury (Including Death) or Property Damage even if any of the allegations of the suit are groundless, false, or fraudulent, and may conduct such investigation and settlement of any claim or suit as it deems expedient; but the company shall not be obligated to pay any claim or judgment or to defend any suit after the applicable limit of the company's liability has been exhausted by payment of judgments or settlements.

##### Exclusions

This policy or endorsement does not apply:

- (a) to liability assumed by the Insured under any contract or agreement except an Incidental Contract; but this exclusion does not apply to a warranty that work performed by the designated contractor shall be done in a

- (b) to Bodily Injury or Property Damage occurring after all work on the project to be performed by the designated contractor or its subcontractors on behalf of the Insured at the site of the project has been completed;
- (c) to liability arising out of the operation; maintenance, use, loading, or unloading of any automobile (a) owned by, rented to, or registered to the Named Insured (b) leased under contract for 6 months or more to the Named Insured, or (c) temporarily used as a substitute for an owned automobile while withdrawn from normal use because of its breakdown, repair, servicing, loss, or destruction;
- (d) to any obligation for which the Insured or any carrier as his insurer may be held liable under any workmen's compensation, unemployment compensation, or disability benefits law, or under any similar law;
- (e) to Bodily Injury to any employee of the Insured arising out of and in the course of his employment by the Insured; but this exclusion does not apply to liability assumed by the Insured under an Incidental Contract;
- (f) to Property Damage to
- (1) property owned or occupied by or rented to the Insured;
  - (2) property used by the Insured;
  - (3) property in the care, custody, or control of the Insured, or any of its employees, or as to which the Insured or any of its employees is for any purpose exercising physical control; or
  - (4) Work performed for the Insured by the designated contractor;
- (g) to Bodily Injury or Property Damage due to War, with respect to
- (1) liability assumed by the Insured under an Incidental Contract or
  - (2) expenses for first aid under the Supplementary Payments; provision of the policy;
- (h) to Property Damage arising out of any substance or material released or discharged from any Aircraft;
- (i) to Bodily Injury or Property Damage arising out of professional services of an architect, engineer, or surveyor performed by or for the Insured in the preparation of maps, plans, opinions, reports, surveys, designs, or specifications, except signs, barricades, and other traffic control devices for the control of traffic;
- (j) to Bodily Injury or Property Damage arising out of the discharge, dispersal, release, or escape of smoke, vapors, soot, fumes, acid, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere, or any water course or body of water; but this exclusion does not apply if such discharge, dispersal, release, or escape is sudden or accidental;
- (k) to the loss of use of tangible property which has not been physically injured or destroyed resulting from:
- (1) a delay in or lack of performance by or in behalf of the Named Insured of a contract or agreement, or
  - (2) the failure of the Named Insured's Products or Work performed by or on behalf of the Named Insured to meet the level of performance, quality, fitness, or durability warranted or represented by the Named Insured.

But this exclusion (k) does not apply to loss of use of other tangible property

resulting from the sudden and accidental physical injury to or destruction of the Named Insured's Products or Work performed by or on behalf of the Named Insured after such products or work have been put to use by any person or organization other than an Insured. None of the exclusions of the policy to which this endorsement is attached apply to the insurance afforded by this endorsement except those exclusions and definitions applicable to the hazards of nuclear energy and other hazards related thereto.

#### 2. PERSONS INSURED

Each of the following is an Insured under this coverage:  
The State of Washington, its officers and employees.

#### 3. LIMITS OF LIABILITY

Regardless of the number of

- (1) Insureds under this policy,
  - (2) persons or organizations who sustain bodily injury or property damage, or
  - (3) claims or suits brought on account of bodily injury, or property damage,
- the company's liability is limited as follows:

The limit of liability for bodily injury liability and property damage liability stated in the Schedule as applicable to "each occurrence" is the total limit of the company's liability for all damages as the result of any one occurrence which causes bodily injury or property damage to one or more persons or organizations. Subject to the limit of liability with respect to "each occurrence", the limit of liability for bodily injury liability and property damage liability stated in the Schedule as "aggregate" is the total limit of the company's liability for all damages, if such insurance applies because of

- (1) property damage arising out of operations performed for the Named Insured by independent contractors of general supervision thereof by the Named Insured,
- (2) property damage arising out of liability assumed under a written contract or agreement.

For the purpose of determining the limit of the company's liability, all bodily injury and property damage arising out of continuous or repeated exposure to substantially the same general conditions shall be considered as arising out of one occurrence.

#### 4. ADDITIONAL DEFINITIONS

"Incidental Contract" means any written

- (1) lease of premises;
- (2) easement agreement except in connection with construction or demolition operations on or adjacent to a railroad;
- (3) undertaking to indemnify a municipality required by municipal ordinance, except in connection with work for the municipality;
- (4) sidetrack agreement; or
- (5) elevator maintenance agreement.

When used in reference to this insurance, "Work" includes materials, parts, and equipment furnished in connection therewith.

#### 5. POLICY TERRITORY

This policy applies only to bodily injury (including death) or property damage which occurs during the policy period within the policy territory.

#### 6. POLICY OR ENDORSEMENT PERIOD

This policy or endorsement applies only to occurrences happening on or after the effective date hereof and during the policy period.

#### 7. CANCELLATION OR CHANGE OF COVERAGE

No termination or change in the coverage provided herein shall be effective without 10 days prior written notice to the Secretary of Transportation.

The amount of coverage shall be not less than a single limit of \$1,000,000 for bodily injury including death and property damage per occurrence.

Certification by the Contractor that a policy, or endorsement to an existing policy, naming the State as an additional insured and otherwise satisfying the requirement set forth above has been obtained from a particular company and is in effect shall be forwarded to the Secretary with the signed contract, as provided in Section 1-03.3.

As soon as possible, but not later than the date upon which request is made by the Contractor for the initial progress estimate payment to be paid under this contract pursuant to Section 1-09.9, the Contractor shall forward to the Secretary the original policy or endorsement obtained. If a policy or endorsement currently in force satisfying all of the above requirements has been previously filed with the Secretary, the Contractor may submit, in lieu of an additional copy of the policy and endorsement, a certification by the insurance company issuing the policy and endorsement that its coverage has been extended to this contract and setting forth the basic coverage limits, together with a copy of the endorsement adding the State as a Named Insured as set forth above.

The State will pay no progress estimate payments under Section 1-09.9 until the Contractor has fully complied with this section. This remedy is not exclusive; and the State may take such other action as is available to it under other provisions of this contract, or otherwise in law. Coverage in the minimum amount set forth herein shall not be construed to relieve the Contractor from liability in excess of such coverage.

#### 1-07.19 Gratuities

The Contractor shall not extend any loan, gratuity, or gift of money in any form whatsoever to any employee or officer of the Department; nor will he rent or purchase any equipment or materials from any employee or officer of the Department. Before payment of the final estimate will be made, the Contractor shall execute and furnish the Department an affidavit certifying that he has complied with these provisions of the contract.

#### 1-07.20 Patented Devices, Materials, and Processes

The Contractor shall assume all costs arising from the use of patented devices, materials, or processes used on or incorporated in the work, and agrees to indemnify and save harmless the State, Commission, Secretary, and their duly authorized agents and employees from all actions of any nature for, or on account of the use of any patented devices, materials, or processes.

#### 1-07.21 Rock Drilling Safety Requirements

The "Threshold Limit Value" referred to in Section 7, Chapter 10, part 2 of the "Occupational Health Standards" of the Division of Safety, Department of Labor and Industries, for rock requiring drilling is shown in the special provisions. It shall be the Contractor's responsibility to maintain safe working conditions by keeping dust concentration below the threshold limit value or by providing those protective

devices that may be required by the Department of Labor and Industries.

**1-07.22 Use of Explosives**

When the use of explosives is necessary for the prosecution of the work, the Contractor shall use the utmost care so as not to endanger life or property, cause slides, or disturb the materials outside the neat lines of the cross-section.

Blasting shall be completed in the vicinity of proposed structures before construction on the structures is undertaken. All explosives shall be stored in a secure manner and place in compliance with laws and ordinances, and all of these storage places shall be clearly marked "Dangerous-Explosives." No explosives shall be left in an unprotected manner along or adjacent to any existing highway.

The Contractor shall notify public utilities and railroads having facilities near the site of the work of his intention to use explosives and the location, date, time, and approximate duration of the blasting. The notice shall be given sufficiently in advance to enable the companies to take any steps as they may deem necessary to protect their property from injury.

**1-07.23 Traffic Control**

**1-07.23(1) Public Convenience and Safety.**

The Contractor shall conduct his operations with the least possible obstruction and inconvenience to the public, and he shall have under construction no greater length or amount of work than he can prosecute properly with due regards to the rights of the public. He shall not open up sections of the work and leave them unfinished, but he shall finish the work as he goes insofar as practicable.

Unless otherwise provided in the special provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. The Contractor shall keep existing roads and streets adjacent to or within the limits of the project open to traffic and maintained in a good and safe condition for traffic at all times. The Contractor shall remove any deposits or debris and shall repair any damage resulting from his operations.

Existing traffic signal and highway lighting systems shall be kept in operation for the benefit of the traveling public during progress of the work, and the State will continue the routine maintenance of such existing systems.

Construction shall be conducted so that as little inconvenience as possible is caused to abutting property owners. Convenient access to driveways, houses, and buildings along the line of work shall be maintained; and temporary approaches to crossing or intersecting highways shall be provided and kept in good condition. When the abutting owners' access across the right of way line is to be eliminated and replaced under the contract by other access, the existing access shall not be closed until the replacement access facility is available.

When the contract requires maintaining traffic through grading areas, roadway excavation and the construction of embankments shall be conducted in such a manner to provide a reasonably smooth and even surface satisfactory for use by public traffic at all times. Sufficient fill at all culverts and bridges to permit traffic to cross shall be placed in advance of other grading operations. If ordered by the Engineer, roadway cuts shall be excavated in lifts and embankments constructed in lifts part width at a time, construction being alternated from one side to the other and traffic routed over the side opposite the one under construction. Culvert installation or

culvert construction shall be conducted on one-half of the width of the traveled way at a time, and that portion of the traveled way being used by public traffic shall be kept open and unobstructed until the opposite side of the traveled way is ready for use by traffic. Upon completion of rough grading, or placing any subsequent layer, the surface of the roadbed shall be brought to a smooth, even condition free of humps and depressions, satisfactory for the use of public traffic. Where grading operations are on or adjacent to an existing traveled way, the grade shall be finished immediately after rough grading is completed; and the surfacing materials shall be placed as the work progresses.

Water or dust palliative shall be applied as ordered by the Engineer for the alleviation or prevention of dust nuisances.

The Contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of the work covered by the contract. The Contractor shall perform any measures or actions the Engineer may deem necessary to protect the public and property. The responsibility and expense to provide this protection shall be the Contractor's except that which is to be furnished by the State as specified in other sections of these Specifications.

**1-07.23(2) Construction and Maintenance of Detours**

The Contractor shall construct, maintain in a safe condition, keep open to traffic, and remove detours and detour bridges that will accommodate traffic diverted from the roadway or bridge during construction. The Contractor shall construct, maintain in a safe condition, and remove detour crossings of intersecting highways and temporary approaches. A minimum of two-way traffic shall be maintained unless approved otherwise.

Construction, maintenance, and removal of detours shown in the contract plans or proposed by the State will be paid at applicable unit contract prices.

Detours caused by the Contractor's operations or for the convenience of the Contractor shall be constructed, maintained, and removed by the Contractor at his expense. Plans for these detours shall be submitted to the Engineer for approval. Surfacing and paving shall be consistent with the requirements of traffic.

Upon failure of the Contractor to immediately provide, maintain, or remove detours or detour bridges when ordered to do so by the Engineer, the State may, without further notice to the Contractor or his Surety, provide, maintain, or remove the detours or detour bridges and deduct the costs from any payments due or coming due the Contractor.

**1-07.23(3) Flagmen, Barricades, and Signs**

Flagmen, Barricades, Signs, and Traffic Control furnished or provided shall conform to the standards established in the latest adopted edition of the "Manual on Uniform Traffic Control Devices" published by the U.S. Department of Transportation. Copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor shall implement the Traffic Control Plan(s) appearing in the contract plans, as applicable. If the Contractor's plan of operations is in conflict with the contract Traffic Control Plan, he may propose modification of the Traffic Control Plan by showing the necessary construction signs and barricades required for the project, and submit it

to the Engineer for approval at least ten days in advance of the time the signs and barricades will be required.

The striping of no passing zones that are to be obliterated in excess of 150 feet by paving operations shall be replaced by "Do Not Pass" and "Pass With Care" signs. The signs shall be located not less than 2 feet outside the usable shoulder nor less than 7 feet above the edge of pavement. Unless otherwise specified in the special provisions, the Contractor shall provide posts and install State-furnished signs for this purpose. The signs shall be maintained by the Contractor until construction operations are complete. When the project includes striping by the Contractor, the signs and posts shall be removed by him when the no passing zones are reestablished by striping. The signs shall be returned to the State, and the posts will become the property of the Contractor for his disposal. When the Contractor is not responsible for striping, the posts and signs will become the property of the State and will be removed by State forces when the no passing zones are reestablished by striping.

The Contractor, at his expense, or upon partial reimbursement as provided in Section 1-07.23(5), shall provide flagmen, signs, and other devices not otherwise specified as being furnished by the State, and shall erect and maintain all barricades, guards, standard construction signs, warning signs, and detour signs as are necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations which may occur on highways, roads, or streets. No work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place.

When flagmen are employed by the Contractor to safeguard highway traffic, the State will furnish the Contractor equipment identical to that furnished for and used by flagmen on departmental maintenance and engineering operations, except for personal wearing apparel. This equipment shall be used by flagmen while actually flagging traffic. Upon completion of the work, the Contractor shall return the equipment in good condition to the Engineer or replace it in kind at his expense; otherwise, the Contractor will be charged for the value of the equipment, and its value may be deducted from payments due or coming due the Contractor. Additional equipment or apparel may be furnished by the Contractor subject to the approval of the Engineer. The State will furnish reflective vests and other equipment only for personnel engaged in flagging and/or traffic control. Any such equipment which is necessary or desirable to protect workmen engaged in other activities will be the Contractor's responsibility.

Any standard signs as well as any other appropriate signs prescribed by the Engineer will be furnished by the State to the Contractor without charge. The Contractor shall erect them on posts and supports and maintain them at his expense in a neat and presentable condition until the necessity for them has ceased. The Contractor shall patrol the traffic control area and reset all disturbed signs and traffic control devices immediately. All nonapplicable signs shall be removed or covered during periods not needed. When the need for any signs furnished by the State has ceased, the Contractor, upon approval by the Engineer, shall take down these signs and return them to the Engineer in good condition. All such signs lost, damaged, or destroyed by the Contractor shall be replaced by him in kind at his expense or their value deducted from payments due or coming due the Contractor. All control signs necessary for nighttime traffic control shall be fully reflectorized.

Upon failure of the Contractor to immediately provide flagmen; provide, erect,

maintain, and remove barricades and lights; or erect, maintain, and remove standard signs when ordered to do so by the Engineer, the State may, without further notice to the Contractor or his Surety, perform any of the above and deduct all of the costs from any payments due or coming due the Contractor.

The Contractor shall be responsible for providing adequate flagmen, barricades, lights, and signs for the protection of the work and the public at all times regardless of whether or not the flagmen, barricades, lights, and signs are ordered by the Engineer or furnished by the State, and the Contractor and his Surety shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.

#### 1-07.23(4) One-Way Piloted Traffic Control Through Construction Zone

The construction of treated bases, surface treatments, and pavements sometimes requires permitting traffic to use a portion of the roadway during the progress of the work under prescribed one-way piloted traffic control. If this is the case, the Contractor shall confine his operations to one-half the roadway, permitting traffic on the other half. If, in the opinion of the Engineer, one-way piloted traffic is necessary, it shall be provided for in the following manner:

##### State-Furnished One-Way Piloted Traffic Control

The State will furnish, without cost to the Contractor, 2 flagmen to control traffic at the ends of the unit within which the roadway is being limited to restricted use, and will furnish a pilot car and driver to lead the traffic through the unit.

##### Contractor-Furnished One-Way Piloted Traffic Control

At the discretion of the Engineer, the Contractor may be required to furnish the 2 flagmen, pilot car, and driver in lieu of the State. The method of calculating reimbursement will be by using only the portion of Section 1-09.6 for (1) Labor and (3) Equipment. No other part of Section 1-09.6 will apply. The labor classification for the flagmen shall be "Flaggers" and the pilot car driver shall be "Pickup Truck, Escort or Pilot Car." For the pilot car, payment shall be made at the rate for 4 x 2 conventional 1/2 ton pickup.

Insofar as conditions will permit, the Contractor shall, at the end of each day, leave the work in such condition that it can be traveled without damage to the work and without danger to traffic. The Engineer shall be the sole judge as to whether or not flagging and piloting can be dispensed with after working hours. In the event that flagging and piloting are required after working hours as a result of carelessness or negligence on the part of the Contractor to properly condition the work at the end of the day, such piloting and flagging costs shall be borne by the Contractor.

All other necessary flagmen within the limits of the pilot car control area shall be furnished by the Contractor subject to the provisions of Section 1-07.23(5).

The Contractor shall furnish any flagmen as may be required to ensure the safety of the traveling public, contractor equipment, and workmen while engaged in preparation of subgrade and/or brooming operations outside of the limits of State-reimbursed pilot car control area. The Contractor shall be entitled to reimbursement for this flagging labor subject to the provisions of Section 1-07.23(5). If a pilot car and driver are required for these operations, they shall be furnished by the Contractor and their costs shall be incidental to the work.

The Contractor shall be responsible for protection of the work and traffic at all times regardless of flagging and pilot car services furnished by the State, and he

and his surety shall be liable for damages and injuries suffered by reason of his operations or any negligence in connection therewith.

For the purpose of providing a common proposal for all bidders, and for that purpose only, the State has estimated the cost of the item of "One-Way Piloted Traffic Control" and has arbitrarily entered the amount in the bid proposal to become a part of the total bid by the Contractor.

#### 1-07.23(5) Reimbursement for Labor for Traffic Control

The Contractor shall furnish all flagging and maintain all temporary traffic control signs and devices necessary to control traffic during construction operations. Traffic control signs and devices shall conform to the requirements set forth in the Manual on Uniform Traffic Control Devices.

When the proposal does not include an item for "Labor for Traffic Control", all costs for temporary traffic control shall be incidental to the project and shall be included in the unit contract prices for the various items of work.

If an item for "Labor for Traffic Control" in a stated amount is in the proposal, the Contractor will be reimbursed for the hours of labor actually sustained for flagging, setting, moving, maintaining in position, and removing temporary traffic control signs and devices required for those construction operations authorized by the Engineer. No payment will be made for vehicles except as specified in Section 1-07.23(4). The amount stated in the proposal is merely the State's estimate, without knowledge of the Contractor's specific method of operation, of that portion of the cost of labor for traffic control reimbursable to the Contractor and is to be used only for the purpose of providing a common amount for all bidders. The amount will be included in the bid proposal and become part of the total bid of the Contractor. The Contractor shall make his own estimate of cost to include his share of the cost in the bid items of the contract based on his contemplated work procedures.

Where allowed, reimbursement is limited to the following areas:

- (a) The entire construction area under contract and for a distance of 500 feet outside the beginning and the end of construction; except that if the project consists of 2 or more sections, the limits will apply to each section individually.
- (b) A detour provided in the plans or approved by the Engineer for by-passing all or any portion of the construction, irrespective of whether the termini of the detour are within the limits of the contract.
- (c) The initial point of entry to or crossing of the public road system from State-furnished quarry, pit, borrow, and/or waste sites, or from State-furnished haul roads serving those sites, when outside the limits in (a) above.

No reimbursement will be made to the Contractor for labor for traffic control required in connection with the movement of equipment or the hauling of materials outside the limits in (a), (b), and (c) above.

The method of calculating reimbursement for labor for traffic control costs incurred in (a), (b), and (c) above shall be made to the Contractor by the State at 100 percent of the sum obtained by using only that portion of Section 1-09.6 for 1a, 1b, and 1c for the labor classification of "Flaggers". No other part of Section 1-09.6 will apply.

Payment under this item shall be limited to the labor required for flagging and for handling signs and traffic control devices which are placed and removed or adjusted daily. Placement of signs and traffic control devices which remain in service throughout the construction or during a major phase of the work is not included.

All costs for signing or traffic control devices not requiring changes during or at the beginning and end of each shift will be incidental to the work and included in the various bid items involved.

#### 1-07.24 Rights of Way

All rights of way for the completed facility will be provided by the State in advance of construction. Any exceptions will be noted in the special provisions.

#### 1-07.25 Opening of Sections to Traffic

The State reserves the right to use and open to traffic any portion of work before completion of the entire contract without incurring any liability to the Contractor, except as otherwise provided in the contract, and without constituting acceptance of any of the work.

If the State opens any portion of the work prior to completion of the entire contract because early opening is specified in the contract or when the Contractor has failed to prosecute the work continuously and efficiently, any work remaining after that portion of the project is open to traffic shall be performed by the Contractor at the unit contract prices for the items of work involved. No additional compensation will be made for costs incurred by the Contractor because of inconvenience, additional length of travel to conform to established traffic patterns and planned access features, compliance with statutes governing traffic regulations and limitations of loads, or for additional flagging costs necessary to protect his operations and the traveling public. The Contractor shall take all costs due to traffic using portions of the work into account when submitting his proposal, and the unit contract prices for the various items of work involved shall include these costs.

#### 1-07.26 Personal Liability of Public Officers

Neither the Commission, the Secretary, the Engineer, nor any other officer or employee of the State shall be personally liable for any acts or failure to act in connection with the contract, it being understood that in such matters, they are acting solely as agents of the State.

#### 1-07.27 No Waiver of State's Legal Rights

The State shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment therefor from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. The State shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate, and payment in accordance therewith, from recovering from the Contractor and his Sureties such damages as it may sustain by reason of his failure to comply with terms of the contract. Neither the acceptance by the Secretary, nor any payment for the whole or any part of the work, nor any extension of time, nor any possession taken by the State shall operate as a waiver of any portion of the contract or of any power herein reserved or any right to damages herein provided, or bar recovery of any money wrongfully or erroneously paid to the Contractor. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor and the State recognize that the impact of overcharges to the State by the Contractor resulting from antitrust law violations by the Contractor's suppliers and/or subcontractors adversely affects the State rather than the Contractor. Therefore, the Contractor agrees to assign to the State any and all claims for such overcharges.

## 1-08 PROSECUTION AND PROGRESS

## 1-08.1 Subcontracting

The Contractor shall perform work amounting to not less than 40 percent of the total original contract costs with his own organization under his immediate supervision, except that any items designated in the contract as specialty items may be performed by subcontract. The cost of any specialty items so performed by subcontract may be deducted from the total costs before computing the amount of work required to be performed by the Contractor with his own organization.

No work shall be subcontracted without written consent of the Engineer. A request to subcontract shall be on the form provided by the Engineer. If requested by the Engineer, the Contractor shall provide substantiation that the proposed subcontractor is experienced and equipped to do the work. The Contractor shall require the subcontractor to comply with Section 1-07.9 and require the subcontractor to furnish all certificates and statements required by the contract. Consent to subcontract will not be given unless the Engineer is satisfied with the proposed subcontractor's prior performance, equipment, experience, and ability to perform the work. Consent to subcontract any portion of the work shall not relieve the Contractor of any responsibility for performance of the contract. Subcontracting shall create no contract between the State and the subcontractor, nor shall the subcontractor have any rights against the State by reason of its subcontract with the Contractor. The Contractor shall be responsible for all work and material furnished, and no subcontract shall in any case release the Contractor of his obligations or liability under the contract and the Contractor's bond.

The Contractor shall submit along with his request to subcontract the names of contracting firms that are to act as agents for the subcontractor, provided that such agents collectively shall not perform work involving over 25 percent of the total subcontract amount being handled by the subcontractor. Other than the 25 percent requirement, the agents shall be subject to the same requirements as subcontractors. The 25 percent limitation on work which may be performed by an agent shall not apply to driving piles, furnishing and driving test piles, or installation of steel reinforcing bars.

Roadside production or processing of materials is construed to include work at any materials site or plant setup which has been established or reopened for the primary purpose of furnishing materials for this and other related projects. This work, including haul to the project site, shall be considered as subcontracting unless performed by the Contractor.

The purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready mix concrete, fabricated structural steel, and/or any other materials produced and furnished from established and recognized commercial plants together with the delivery of these materials to the site of the work by means of vehicles owned or operated by such plants or by recognized commercial hauling companies shall not be considered as subcontracting under these provisions.

Before payment of the final estimate, the Contractor shall submit Affidavit of Amounts Paid to certified Disadvantaged, Minority, or Women's Business Enterprises (DB/WBE or MBE/WBE) participants on the form provided by the Engineer, certifying the amount paid to DB/WBE or MBE/WBE subcontractors and subcontractors agents.

When a portion of the work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the Engineer, the subcontractor shall be removed immediately upon the Engineer's written request and shall not again be employed on the work.

#### 1-08.2 Assignment

The performance of the contract or any part of it shall not be assigned except upon the written consent of the Engineer. Consent will not be given to any proposed assignment which would relieve the original Contractor or his Surety of their responsibilities under the contract.

The Contractor may assign moneys due or to become due him under the contract. This assignment will be recognized by the Department, if given written notice, to the extent permitted by law; but any assignment of moneys shall be subject to all setoffs, withholdings, and deductions provided for by law and under the contract.

#### 1-08.3 Progress Schedule

Immediately after being awarded a contract, the Contractor shall submit a progress schedule to the Engineer for approval. The schedule shall show the proposed order of work, the expected beginning and completion times for the salient work features, and completion of all the work within the specified contract time. If specified by the contract, the schedule shall be in the form of bar graphs developed under the critical path method, P.E.R.T., or other, similar methods. Adequate material, equipment, and labor shall be provided by the Contractor to carry out the progress schedule submitted by him.

The Contractor shall submit supplementary progress schedules to accurately reflect the times of construction and any delays which may have been encountered in the performance of the work.

The progress schedule and supplementary progress schedules shall be consistent with the time and order of work requirements of the contract.

Approval of any schedule submitted by the Contractor shall not be construed to assign responsibility of performance or contingencies to the State or relieve the Contractor of his responsibility to adjust his forces, equipment, and work schedules as may be necessary to ensure completion of the work within prescribed contract time.

#### 1-08.4 Prosecution of Work

The Contractor shall begin work within 10 days from the date of execution of the contract by the Secretary and shall diligently pursue the work to completion within the time specified in the contract. There shall be no voluntary shutdowns or slowing of operations by the Contractor without prior approval of the Engineer, and such approval shall not relieve the Contractor from his responsibility to complete the contract work within the prescribed contract time.

#### 1-08.5 Time for Completion

The contract in its entirety shall be completed within the time specified in the special provisions or as extended by the Engineer. The contract time shall start with the first working day following the 25th day after award of the contract, or the first working day following execution of the contract by the Secretary, whichever occurs last, or such other day which may be specified in the special provisions. The special

provisions will state the contract time in working days. A working day is any day not otherwise defined herein as a non-working day. A non-working day is defined as a Saturday, Sunday, a recognized holiday, or a day on which the Contractor is specifically required by the contract to suspend construction. Recognized holidays shall be as follows: January 1, the third Monday of February, Memorial Day, July 4, Labor Day, November 11, Thanksgiving Day and the day following Thanksgiving Day, and December 25. When any of the above recognized holidays fall on a Sunday, the following Monday shall be counted as a holiday. When any of the above recognized holidays fall on a Saturday, the preceding Friday shall be counted as a holiday.

During the life of the contract, each successive working day shall be charged to the contract as it occurs except any day or part thereof which is designated a non-working day by the Engineer. The Engineer will furnish the Contractor a weekly statement of working days report showing the number of working days charged to the contract for the preceding week, the number of working days specified for completion of the contract, and the number of working days remaining to complete the contract. The Contractor will be allowed 10 days from the date of each report in which to file a written protest of any alleged discrepancies for that report otherwise the report shall be deemed to have been accepted by the Contractor as correct. If all work is satisfactorily completed on or prior to the expiration of contract time, no action need be taken by either the Contractor or the State with respect to an extension of time (Section 1-08.8).

The Engineer will advise the Contractor in writing of the date on which all work required by the contract was completed. That date will constitute the date of completion of the contract. The notification of date of completion shall not constitute acceptance of the work by the Secretary.

#### 1-08.6 Suspension of Work

The Engineer may order all or part of the work suspended for any period of time as he deems proper for any of the following conditions:

1. Unsuitable weather and such other conditions beyond the control of the Contractor that prevent satisfactory and timely performance of the work; or
2. The Contractor fails to perform any provisions of the contract or orders given to him.

The Contractor shall not suspend work unless ordered or authorized to do so by the Engineer. The Contractor shall immediately suspend work or resume the suspended work when ordered to do so by the Engineer.

Suspension of work by the Engineer for reasons stated in condition (1) or (2) above shall not be grounds for any claim by the Contractor for damages except as provided herein.

The periods of suspension due to condition (1) above will be allowed as non-working days unless the Engineer concludes that the Contractor could have performed the suspended work if he had diligently pursued the work prior to the suspension. The non-working days allowed will be the number of working days, or parts thereof, that the Engineer determines the completion of the entire project has been delayed by the suspension.

The periods of suspension due to condition (2) above or for failure of the Contractor to timely perform work shall not be grounds for allowance of time but shall be counted as working days and not relieve the Contractor from any

responsibility assigned under the contract.

If the performance of all or any part of the work is suspended, delayed, or interrupted for an unreasonable period of time by an act of the State in the administration of the contract, or by failure to act within the time specified in the contract (or if no time is specified, within a reasonable time), the Engineer will make an adjustment for any increase in the cost of performance of the contract (excluding profit) necessarily caused by the suspension, delay, or interruption. However, no adjustment will be made for any suspension, delay, or interruption if (1) the performance would have been suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or (2) an equitable adjustment is provided for or excluded under any other provision of the contract.

If the performance of the work is suspended, delayed, or interrupted for an unreasonable period of time that the Contractor believes to be the responsibility of the State, he shall immediately submit a written notice to the Engineer. No adjustment shall be allowed for any costs incurred more than ten (10) calendar days before the date the Engineer receives the Contractor's written notice. If the Contractor contends he has suffered damages as a result of such suspension, delay, or interruption, no claim shall be allowed unless the claim (in a stated amount) is asserted in writing as soon as practicable, but no later than the date of the Contractor's signature on the Final Contract Voucher Certification. The Contractor shall keep full and complete records of the costs and additional time of such suspension, delay, or interruption and shall permit the Engineer to have access to those records and any other records as may be deemed necessary by the Engineer to assist in evaluating the claim for damages. The Engineer's determination as to whether an adjustment should be made will be final and binding.

#### 1-08.7 Maintenance During Suspension

In preparation for and during suspensions of work as provided in Section 1-08.6, the Contractor shall take every precaution to prevent damage to or deterioration of the work. Any suspension of work shall not relieve the Contractor of any of his responsibilities under the contract except as provided in this section.

If a suspension of work is ordered for unsuitable weather or unfavorable conditions, and the work, in the opinion of the Engineer, could have been performed prior to the suspension had the Contractor diligently prosecuted the work when weather or conditions were suitable, or if the suspension of work is ordered because of the failure of the Contractor to perform any provisions of the contract or orders given, the Contractor at his expense shall do all work necessary to provide a safe, smooth, and unobstructed roadway through construction for use by public traffic during the period of suspension as specified in Section 1-07 or the special provisions. If the Contractor fails to do such work, the State will perform such work and deduct the costs from any money due or coming due the Contractor.

If a suspension of work is ordered in writing by the Engineer for an extended period of time due to winter or seasonal weather or unforeseen conditions, and, in the opinion of the Engineer, the Contractor has prosecuted the work with energy and diligence prior to this suspension of operations and has provided a temporary road or detour which may be maintained by routine maintenance forces of the State during the period of suspension, the costs of maintaining a smooth and unobstructed road or detour will be borne by the State at no cost to the Contractor. Any areas which are not open to traffic shall be maintained and safeguarded by the Contractor

at his expense. During suspensions of work for which the State is responsible for maintenance as provided above, the State assumes no responsibility except for routine maintenance which includes and is restricted to the following:

- (a) Maintenance of the traveled roadway and/or detour surface;
- (b) Maintenance of roadway drainage along and under the traveled roadway and/or detour; and
- (c) Maintenance of all necessary barricades, signs, and lights to direct the traffic through the construction area and/or detour.

Where the State is responsible for maintenance during suspensions as provided above the Contractor agrees to accept the traveled roadway and/or detour as it has been maintained by the State, and no claim shall be made on account of its condition or the manner in which maintenance has been performed by the State.

Any suspension of work shall not relieve the Contractor of his responsibility for repairing or restoring the roadway, its slopes, and drainage facilities to the requirements of the plans and for performing all other work according to the contract.

#### 1-08.8 Extensions of Time

The time for completion of the contract will be extended for a period equivalent to the time which the Secretary determines the work was delayed by one or more of the following causes occurring during the performance of work:

- (a) Unsuitable weather not covered by non-working day allowances under Section 1-08.5 and which are covered by written protest in accordance with said section;
- (b) The acts, neglects, or defaults of the State, any of its officers or employees, or any other Contractor employed by the State;
- (c) Fire or other casualty for which the Contractor is not responsible;
- (d) Combined action of workmen; and
- (e) Other conditions that permit extensions of time under other provisions of these Specifications.

No extension of time shall be allowed for any of the above which are caused by or result from, default or collusion of the Contractor, his act or failure to act, or his failure to perform the work according to the contract.

The time specified in the special provisions is recognized as sufficient to procure all materials and labor and perform all work required under the contract. In general, failure to procure materials or workmen or perform the work for any reason other than those listed above will not be considered as an adequate reason for an extension of time.

The reasons for and times of extensions shall be determined by the Secretary, and such determination will be final. To warrant consideration, requests for extensions of time and the reasons for claimed time shall be submitted in writing by the Contractor within 10 working days after the occurrence of the delay.

The Secretary may grant extensions of time for exceptional causes not specifically identified above subject to the Contractor's request for the extension being fully supported with documented proof that the Contractor had no direct or indirect control over the cause of the delay and could take no reasonable action to avoid or offset the delay. Failure by the Contractor to utilize efficiently all available time after execution of the contract will be considered in evaluating any requests for extensions of time.

The Contractor's letter must bear consent of surety on the bond when the accumulated requests are for 20 percent or more of the original contract time.

**1-08.9 Liquidated Damages**

Time is of the essence of the contract. Delays inconvenience the traveling public, obstruct traffic, interfere with and delay commerce, and increase risk to highway users. Delays also cost tax payers undue sums of money, adding time needed for administration, engineering, inspection, and supervision.

Because the State finds it impractical to calculate the actual cost of delays, it has adopted the following schedule of liquidated damages for failure to complete a contract on time:

Accordingly, the Contractor agrees:

1. To pay (according to the schedule below) liquidated damages for each working day beyond the contract deadline date for completion, and
2. To authorize the Secretary to deduct these liquidated damages from any money due or coming due to the Contractor.

ORIGINAL CONTRACT AMOUNT		LIQUIDATED DAMAGES	
From More Than	To and Including		Per Working Day
\$ 0	\$ 25,000		\$ 63
25,000	50,000		105
50,000	100,000		154
100,000	500,000		210
500,000	1,000,000		315
1,000,000	2,000,000		420
2,000,000	5,000,000		630
5,000,000	10,000,000		840
10,000,000 and more			980

When the contract work is completed to the extent that the State has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains to complete the total contract, the Engineer may determine the contract work is substantially complete. The Engineer will notify the Contractor in writing of the substantial completion date. For overruns in contract time occurring after the date so established, the schedule of liquidated damages listed above will not apply. After the substantial completion date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project from the date of substantial completion to the date of actual completion of all the contract work. The Contractor shall complete the remaining work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the contract.

Liquidated damages will not be assessed for any days for which an extension of time is granted. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire contract.

**1-08.10 Termination of Contract**

**1-08.10(1) Termination for Default**

If the Contractor:

- (a) Refuses or fails to supply sufficient properly skilled workmen or materials of the proper quality;
  - (b) Fails to prosecute the work continuously to completion with promptness and diligence;
  - (c) Fails to perform any of his obligations under the contract; or
  - (d) Becomes insolvent or is declared bankrupt or commits any acts of bankruptcy or insolvency or makes an assignment for the benefit of his creditors:
- The Secretary may, by serving written notice to the Contractor and his Surety,
- (a) Transfer the performance of work from the Contractor to his Surety;
  - (b) Provide such sufficiency of labor or materials as required and deduct the costs from any money due or coming due to the Contractor under the contract; or
  - (c) Terminate the contract.

If the Secretary elects to pursue one remedy, it will not bar him from pursuing other remedies on the same or subsequent breaches.

Upon receipt of a notice that the work is being transferred to the Surety, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances for the purpose of completing the work included under the contract and employ by contract or otherwise any person or persons satisfactory to the Secretary to finish the work and provide the materials without termination of the contract. Such employment shall not relieve the Surety of its obligations under the contract and the bond. If there is a transfer to the Surety, payments on estimates covering work subsequent to the transfer shall be made to the extent permitted under law to the Surety or its agent without any right of the Contractor to make any claim.

If the Secretary terminates the contract by any of the means provided above, the Contractor shall not be entitled to receive any further payment on the contract until the work has been fully performed, at which time, if the unpaid balance of the amount to be paid under the contract due the Contractor shall exceed the expenses incurred by the State in completing the work including all increased costs for completing the work, and all damages sustained, or which may be sustained, by the State by reason of such refusal, neglect, failure, or discontinuance of work by the Contractor, the excess shall be paid by the State to the Contractor. If the expenses and damages exceed the unpaid balance, the Contractor and his Surety shall be jointly and severally liable to the State and shall pay the difference to the State Treasurer on demand.

**1-08.10(2) Termination for Public Convenience**

The Secretary may terminate the contract in whole, or from time to time in part, whenever:

- (a) The Contractor is prevented from proceeding with the work as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense; or an Executive Order of the President or Governor of the State with respect to the preservation of energy resources;
- (b) The Contractor is prevented from proceeding with the work by reason of a preliminary, special, or permanent restraining order of a court of competent jurisdiction where the issuance of such restraining order is primarily caused by acts or omissions of persons or agencies other than the Contractor; or

(c) The Secretary determines that such termination is in the best interests of the State.

#### 1-08.10(3) Payment for Termination for Public Convenience

Whenever the contract is terminated in whole or in part before completion of all items of work in accordance with Section 1-08.10(2), payment will be made for the actual work performed at unit contract prices for completed items of work. Partially completed items of work will be paid for by agreed prices or by force account as provided in Section 1-09.6. Deleted work will be paid for as provided in Section 1-09.5.

#### 1-08.10(4) Arbitration of Disputes

After receipt of a Notice of Termination in accordance with Section 1-08.10(2), the Contractor shall submit to the Engineer his termination claim in sufficient detail to enable the Engineer to ascertain the basis and amount of the claim. The claim shall be submitted promptly but in no event later than 60 days from the effective date of termination. The Contractor shall pursue resolution of his claim through the established administrative channels to the office of the District Administrator. The Contractor agrees to make his records available to the extent deemed necessary to verify his claim. In the event the claim is not resolved and an agreement reached at the office of the District Administrator, the Contractor may appeal to the Secretary for determination. The decision of the Secretary or his representatives shall be final.

### 1-09 MEASUREMENT AND PAYMENT

#### 1-09.1 Measurement of Quantities

All bid items of work acceptably completed under the contract will be measured by the Engineer according to United States standard measure.

Measurements will be made as provided in this section unless otherwise provided for by individual measurement specifications.

The method of measurement and computations to be used in determination of quantities of material furnished or of work performed under the contract will be those methods generally recognized as conforming to good engineering practice and will be carried to the proper significant figures or fractions of units for each item, to conform to the usual practice of the Department.

Unless otherwise specified, measurements will be made horizontally or vertically. In determining the area for items bid on a square yard basis, the measurements will be on the neat dimensions shown in the plans or as altered by the Engineer. No deductions in area will be made for individual fixtures having an area of 9 square feet or less.

Structures will be measured according to neat lines shown in the plans or as altered by the Engineer to fit field conditions.

All items which are measured by the linear foot, such as pipe culverts, guard rail, underdrains, etc., will be measured parallel to the base or foundation upon which the structures are placed, unless otherwise shown in the plans.

In computing volumes of excavation and embankment, the average end area method will be used. Corrections for curvature will be made where deemed advisable by the Engineer. Computations for determining volumes of excavation and embankment may be based in whole or in part upon ground elevations and related data determined by photogrammetric methods.

The term "gage," when used in connection with the measurement of plates, means the U.S. Standard Gage, except that when reference is made to the measurement of galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing, the term "gage" or thickness means that specified in AASHTO M 36, M 167, M 196, M 197 or M 219.

When the term "gage" refers to the measurement of wire, it means the wire gage specified in AASHTO M 32.

The term "ton" means the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weight will be weighed according to the requirements of Section 1-09.2. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty at least daily or at such times as the Engineer directs. Each truck shall bear a plain, legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. When required by the Engineer, the loads shall be leveled when the vehicles arrive at the point of delivery to facilitate measurement.

Cement will be measured by the pound or ton.

Asphalt will be measured by the gallon or ton. Volumes will be measured at 60 degrees F or will be corrected to the volume at 60 degrees F in accordance with ASTM D 1250. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt is shipped by truck or transport, net certified weights or volumes, subject to correction for loss or foaming, may be used for computing quantities.

**CONVERSION FACTORS  
AVERAGE WEIGHTS AND VOLUMES OF ASPHALTS**

Grade	Gallons per	Pounds per
	Ton @60 dg. F.	Gallon @60 dg. F.
<b>LIQUID ASPHALTS</b>		
70	253	7.90
250	249	8.03
800	245	8.16
3000	241	8.30
<b>PAVING ASPHALTS</b>		
AR 2000W	237	8.44
AR 4000W	235	8.51
<b>EMULSIFIED ASPHALTS</b>		
All grades	240	8.33

Timber will be measured by the thousand feet board measure (MBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment means complete payment for the work described for that item in the contract.

When a complete structure or structural unit is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and the items are identified by gage, unit weight, section dimensions, etc., the identification will be considered to be nominal weights or dimensions. Manufacturing tolerances established by the industries involved will be accepted unless more stringently controlled by tolerances in cited specifications.

No measurement will be made for:

1. Work performed or materials placed outside of lines indicated in the plans or established by the Engineer;
2. Materials wasted, used, or disposed of in a manner not called for under the contract;
3. Rejected materials (including material rejected after it has been placed, if the rejection is due to the Contractor's failure to comply with the provisions of the contract);
4. Hauling and disposing of rejected materials;
5. Material remaining on hand after completion of the work except as provided in Section 1-09.10; or
6. Any other work or material when payment is contrary to any provision of the

contract.

**1-09.2 Weighing Equipment**

Scales for the weighing of natural, manufactured, or processed highway and bridge construction materials obtained from natural deposits, stockpiles, or bunkers, which are required to be proportioned or measured and paid for by weight, shall be furnished, erected, and maintained by the Contractor, or be permanently installed certified commercial scales.

**General Requirements of Weighing Equipment**

Equipment for weighing highway and bridge construction materials shall be accurate within 1/2 percent of the correct weight throughout the range of use. It shall be the Contractor's responsibility to provide scales with beams or dial scales or other reliable equipment built and erected in a manner which will prevent displacement, binding, or vibration of the various components. The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and inspector can safely and conveniently view the dials, beams, rods, and operating mechanism of the scale. All working parts of scales or connections shall be protected from material falling upon or against them, and protected from wind and weather. Special care and protection of knife edges shall be exercised. Bunkers and platforms shall be kept clean of all materials which may accumulate and introduce errors.

At each batching and platform scale installation, the Contractor shall have available throughout the period of use, 10 standard 50 pound weights for calibrating and testing the weighing equipment or suitable weights and devices for other approved calibrating and testing equipment.

**Specific Requirements for Batching Scales**

The weighing equipment and the hopper shall be so arranged that the operator can conveniently remove material from the hopper and view beams or dials simultaneously. Scales shall be of a type well suited for supporting a weighing hopper. Weighing hoppers mounted on platform scales shall have the center of gravity directly over the center line of the platform.

Batch scales shall be tested for accuracy and serviced by the scale company's representative before use at a new site and every 6 months thereafter. The Engineer shall be provided with a copy of the final test results each time the scales are checked. Subsequently, the Contractor shall have the scales checked by his operating personnel under the observation of the inspector at such other times as requested. The scales used for weighing Portland cement and asphalt cement shall be separate from those for weighing other materials. The graduated or marked intervals shall be uniform in spacing throughout the length of the beam or dial and based on the nominal rated capacity of the scale. Graduated intervals for all scales shall not exceed 1/10 of 1 percent of the nominal rated capacity of the scale; but not less than 1 pound.

All materials proportioned by weight shall be weighed on accurate, approved scales by competent, qualified Contractor personnel at locations approved by the Engineer.

*Specific Requirements for Platform Scales*

Platform scales shall be of sufficient size and capacity to weigh the entire hauling vehicle or combination of connected vehicles at one time. No part of the connected vehicle or combination will be permitted off the platform at the time of weighing.

A platform scale operator will be designated by the Engineer to weigh all materials on the Contractor's platform scales and make the necessary records at no cost to the Contractor. The Contractor shall furnish appropriate tickets for self-printing types of scales. Unless otherwise authorized by the Engineer, the operator of each vehicle weighed shall obtain a weigh or load ticket from the scale operator and deliver a legible ticket to the Material Receiver at the point of delivery of the material. If the Contractor elects to use commercial scales, he shall furnish approved load tickets at the scale and duplicate legible copies to the Material Receiver at the delivery point and guarantee permission for a State Representative to periodically observe the weighing and to check and compile the daily record of scale weights. If the Contractor elects, he may furnish certified weights of the materials in accordance with the Laws of the State of Washington. Tare weights shall be taken of each conveyance at least daily.

The Contractor shall provide a suitable scale house of 6 feet by 10 feet minimum area which is wind and weather tight, contains appropriate windows for light and ventilation and door for access, with provisions for locking securely. The scale house shall be equipped with table and chair, electricity for illumination, and suitable space heater. Sanitary facilities shall be furnished by the Contractor and made available near by.

Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end to eliminate binding and shifting. The platform scale beam or dial shall have graduated intervals of no more than 40 pounds. When testing the scales, the weights shall be read and recorded to the nearest 20 pounds and during weighing operations, weights shall be read and recorded to the nearest cwt.

Before use at a new site and every 6 months thereafter, the scales shall be approved in accordance with local ordinances or rules of the State Department of Agriculture's Weights and Measures Section, or be serviced and tested by a scale company representative with at least 10,000 pounds, with a copy of the final test results provided to the Engineer.

*Specific Requirements for Belt Conveyor Scales*

Conveyor belt weighing may be accepted for untreated materials provided that this method or device shall meet the general requirements of weighing equipment.

All belt-conveyor scales shall conform to the requirements for BELT-CONVEYOR SCALES as specified in the National Bureau of Standards, Handbook No. 44, except as modified by these Specifications.

A daily static load test shall be made after about 1/2 hour of continuous running of the belt-conveyor and whenever the air temperature varies significantly. A chain test will be required whenever a need for adjustment has been determined by the daily static load test.

The test chain calibration computation, calibration procedures and results, and related documents shall be available for review by the Engineer. The test chain shall be clearly marked with its calibration. It shall be carried in a suitable container and shall be immediately available for testing of the belt conveyor scales.

Comparisons of accuracy may be made by checking the average of 5 or more sequential hauling unit payloads on platform scales meeting the requirements of these Specifications. A comparative accuracy of 0.5 percent of the payload of the average hauling unit will be acceptable. Since the recording odometer of conveyor belt scales in general use is graduated in 0.1 ton (i.e. 200 pound) increments, and since the recording is a cumulative process, minor differences in reading or variations smaller than 0.1 ton may carry over from one vehicle unit to another. Confirmation of the conveyor weights will, for greater accuracy, be based on the tonnage values obtained from readings taken from the scaled odometer at the beginning and end of each check period. The number of check loads may be increased by the Engineer should the test results fluctuate.

The Contractor shall furnish appropriate serially numbered tickets as approved by the Engineer for self-printing of the time and date of loading and the approximate load out weight. Each ticket shall be imprinted from a recording device at the loading point by the truck driver and delivered to the Inspector at the job site. The delivered ticket shall be marked with the hauling conveyance equipment number.

The recording tape, odometer, totalizer, calibration adjustment, and clock-time imprinter shall be secured and locked. All keys shall be in the possession of the Engineer.

*Measurement*

In the event inspection reveals the scales have been underweighing, they shall be adjusted and no additional payment to the Contractor will be allowed for materials previously weighed and recorded. Scales overweighing (indicating more than true weight) will not be permitted to operate and all materials received subsequent to the last previous correct weighing accuracy test will be reduced by the percentage of error in excess of one-half of 1 percent. No payment will be made for materials received by weight which have not been weighed in accordance with the foregoing specification, or other method specifically approved in writing for the individual project.

Minor incidental construction items for which the specifications and plans require measurement by weight may, at the Contractor's request and with the Engineer's approval, be converted from volume to weight with the factor of 1.25 tons per cubic yard of volume measure.

*Payment*

All costs in connection with furnishing, installing, certifying and maintaining scales, for furnishing check weights and scale house, and for all other items specified in this section for the weighing of highway and bridge construction materials for proportioning or payment shall be included in the unit contract prices for the various pay items of the project.

**109.3 Scope of Payment**

The payment provided for in the contract shall be full compensation to the Contractor for:

1. Furnishing all materials and performing all work under the contract (including changes in the work, materials, or plans) in a complete and acceptable manner;
2. All risk, loss, damage, or expense of whatever character arising out of the

nature or prosecution of the work; and

3. All expense incurred resulting from a suspension or discontinuance of the work as specified under the contract.

The payment of any estimate or retained percentage shall not relieve the Contractor of his obligation to make good any defective work or materials.

Unless the plans and special provisions provide otherwise, the unit contract prices for the various bid items shall be full compensation for all labor, materials, supplies, equipment, tools and all other things required to completely incorporate the item into the work as though the item were to read "In Place".

If the "Payment" clause in the specifications, for an item included in the proposal, covers and considers all work and material essential to that item, then the work or materials will not be measured or paid for under any other item which may appear elsewhere in the proposal or specifications.

Certain payment items appearing in these Specifications may be modified in the plans and proposal to include:

1. The words "For Structure", "For Concrete Barrier", "For Bridge", etc. with the intent of clarifying specific use of the item; or
2. The words " - Site (Site Designation)", with the intent of clarifying where a specific item of work is to be performed.

Modification of payment items in this manner shall in no way change the intent of the specifications relating to these items.

#### 1-09.4 Changes

Payment for work pursuant to a change order as provided in Section 1-04.4, other than deleted work, shall be full compensation for any such change. When the work performed can be measured and paid for at unit prices as provided in the contract, it will be measured and paid for at such prices. Otherwise payment will be at the price agreed by the parties. If the parties are unable to agree, the Engineer will determine the compensation, or, if deemed appropriate by the Engineer, compensation will be paid by force account as provided in Section 1-09.6. Deleted work will be paid for as provided in Section 1-09.5.

#### 1-09.5 Deleted Items

The State will have the right to cancel all or portions of the contract relating to the construction of any item or items. The State will pay to the Contractor a fair and equitable amount covering all direct project costs incurred prior to the date of cancellation of such work by the Engineer.

No payment will be made for items which are deleted from the contract and not performed. No payment will be made for any anticipated profits which would have been earned on work deleted or on costs incurred prior to the deletion of the work.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of cancellation of the work by the Engineer, will either be purchased from the Contractor by the State at the actual cost and shall become the property of the State, or the State will reimburse the Contractor for his actual costs connected with returning these materials to the suppliers.

#### 1-09.6 Force Account

Whenever, under the terms of the contract, work or materials are to be paid for as force account, the amount of the payments will be determined as follows:

#### 1-10 Labor:

The Contractor will be reimbursed for labor and for foreman supervision dedicated solely to the particular operation. The Contractor will not be reimbursed for general superintendents or general foreman. Payment will be computed by the Engineer and will be the sum of the following:

a. **Weighted Wage Rate:** The agreed basic wage rate for all labor used shall be restricted to the current basic wage the Contractor is obligated to pay and shall reflect the Contractor's actual cost. Fringe benefits will be added to the basic wage rates and will include benefits paid on behalf of labor by the Contractor as follows:

- (1) Federal Insurance Compensation Act (FICA)
- (2) Federal Unemployment Tax Act (FUTA)
- (3) State Unemployment Compensation Act (SUCA)

The above items will be combined into a single wage rate for each classification of labor used which shall be designated as the "Weighted Wage Rate" for the identified class of labor. The weighted wage rate shall reflect the Contractor's actual cost and shall not exceed that which is customarily paid comparable labor. The Contractor is required to pay the minimum rate as specified in Section 1-07.9. If overtime is authorized by the Engineer, the weighted wage rate will be established in the same manner as above.

b. **Travel Allowance and/or Subsistence:** The Contractor will be reimbursed the actual costs of travel and/or subsistence allowances paid to labor engaged upon the work when the allowances are required by regional labor agreement or is customarily paid by the Contractor to comparable labor for performing other work.

c. **Industrial Insurance and Medical Aid Premiums:** The Contractor will receive compensation for Marine Industrial Insurance, State of Washington Industrial Insurance, and Medical Aid premiums which become an obligation of the Contractor and are chargeable to the force account work on the basis of time worked. The agreed rate(s) of compensation for the above premiums shall be a composite rate(s) based upon the full premium for Industrial Insurance and 1/2 the premium for Medical Aid which premiums are prescribed by the regulatory body for the Contractor(s) actually performing the force account work. This composite rate may be adjusted upon request to conform with adjustments prescribed by the regulatory body.

d. **Overhead and Profit:** The Contractor will be reimbursed an amount equal to 20 percent of the sum of the items listed in a, b, and c above for overhead, profit, and any other cost incurred in supplying labor.

#### 2. Materials:

For all materials furnished by the Contractor for the work, payment will be made for his actual invoice cost of the materials including actual freight and express charges and applicable taxes as specified in Section 1-07.2. A deduction shall be made for all offered or available discounts and rebates notwithstanding the fact that they may not have been taken by the Contractor. To these costs a sum equal to 15 percent will be added for overhead, profit, and any other cost incurred in supplying the materials.

The Contractor shall furnish valid copies of vendor's invoices including freight and express bills as support for all charges for materials. Materials that may be furnished from Contractor's stocks for which an invoice is not available, the Contractor shall furnish an affidavit certifying to his actual cost of these materials.

If the Contractor's cost of any materials furnished is excessive or if the Contractor does not furnish satisfactory evidence of his costs, the Engineer reserves the right to establish the cost of all or part of the materials. The established cost will be the lowest current wholesale prices (including delivery cost) from a source where the required quantity of the material is available. A deduction will be made for all applicable discounts and exemptions.

The Engineer reserves the right to provide State furnished materials. The Contractor shall have no claims for any costs, overhead, or profit for these materials.

### 3. Equipment:

The approval of the Engineer shall be required for the selection of machine-power tools or equipment prior to their use on force account.

The payment for any machine-power tools or equipment shall be made according to the current AGC/WSDOT Equipment Rental Agreement which is in effect at the time the force account is authorized. The rates as set forth in the Rental Rate Blue Book (as modified by the current AGC/WSDOT Equipment Rental Agreement) are the maximum rates allowable for equipment of modern design and in good working condition. These rates shall be full compensation for all fuel, oil, lubrication, repairs, maintenance, insurance, small tools, overhead, profit, and all other costs incidental to furnishing and operating the equipment except labor for operation.

Current copies of the Rental Rate Blue Book and the AGC/WSDOT Equipment Rental Agreement will be maintained at each District office of the Department of Transportation and at each of the offices of the Associated General Contractors of America (in Seattle, Spokane, Tacoma, and Wilsonville, Oregon) where they are available for inspection.

Transportation of tools and equipment not already available on the project site will not be paid except as allowed herein.

When work is performed on a force account basis by approved subcontractors, the Contractor will be allowed an additional markup based on the following schedule:

First \$10,000.00 of work done by subcontractors (85 percent of equipment rates from Rental Rate Blue Book and less markup for overhead and profit on labor and materials) allow 10 percent supplemental markup.

All work in excess of \$10,000.00 done by subcontractors (85 percent of equipment rates from Rental Rate Blue Book and less markups for overhead and profit on labor and materials) allow 5 percent supplemental markup.

The 10 percent supplemental markup shall apply to the first \$10,000.00 accumulated total of all force account work performed by subcontractors.

Force account mobilization is defined as the preparatory work performed by the Contractor including transportation of tools, equipment, and personal travel time (when included in a bargaining agreement). The State may pay for mobilization of equipment and labor if the force account item is not an item included in the

original contract proposal or such other contract items as may be included in the special provisions as being eligible for reimbursement for mobilization. Off-site work in preparation for the travel to the project, costing \$300 or less will not be paid. The State will not pay for mobilization for off-site preparatory work for force account items under any circumstances unless the Contractor specifically makes a request in writing in advance of any such mobilization work. The written request shall include an estimate for mobilization costs involving off-site preparatory work and the basis for reimbursement. The approval of the Engineer will be required prior to commencing the mobilization for all force account. To the agreed final amount of mobilization for force account shall be added an amount equal to 15 percent of sum for all other costs, overhead and profit.

The payments provided above shall be full payment for all work done on a force account basis. The payment shall cover all expenses of every nature, kind, and description, including overhead expenses, profit, occupational tax and any other federal or State revenue acts, premiums on public liability and property damage insurance policies, and for the use of small tools and equipment for which no rental is allowed.

No claim for force account shall be allowed except upon written order by the Engineer prior to the performance of the work. No work shall be construed as force account work which can be measured under the specifications and paid for at the unit prices named in the contract.

The amount and costs of any work to be paid by force account shall be computed by the Engineer, and the amount certified by him shall be final, conclusive, and binding upon the Contractor.

The Contractor's cost records pertaining to work paid for on a force account basis shall be open to inspection or audit by representatives of the Department during the life of the contract and for a period of not less than three years after the date of acceptance of the contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these cost records of all subcontractors and agents shall be open to similar inspection or audit for the same period of time. If an audit is to be commenced more than 60 days after the acceptance date of the contract, the Contractor will be given a reasonable notice of the time when the audit is to begin.

### 1-09.7 Mobilization

Mobilization consists of pre-construction expenses and the costs of preparatory work and operations performed by the Contractor which occur before 10 percent of the total original contract amount is earned from other bid items. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Any portion of the work covered by a specific bid item or incidental work which is to be included in a bid item or items.

2. Profit, interest on borrowed money, overhead, or management costs.

Based on the lump sum contract price for "Mobilization", partial payments will be made as follows:

1. When 5 percent of the total original contract amount is earned from other bid items, excluding amounts paid for materials on hand, 50 percent of the amount bid for mobilization, or 5 percent of the total original contract amount, whichever is the least, will be paid.

2. When 10 percent of the total original contract amount is earned from other

bid items, excluding amounts paid for materials on hand, 100 percent of the amount bid for mobilization, or 10 percent of the total original contract amount, whichever is the least, will be paid.

3. Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10 percent of the total original contract amount will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the contract.

#### 1-09.8 Payment For Material on Hand

Partial payments may be made on monthly estimates to the extent of the cost of materials to be incorporated into the completed work, if the materials meet the requirements of the plans and specifications and are delivered to or stockpiled in the vicinity of the project or other storage sites specifically approved by the Engineer.

The cost of the materials will be determined by written evidence supplied by the Contractor in sufficient detail to determine his actual cost of the material. The Contractor shall furnish the Engineer a paid invoice prior to the next progress payment following the initial payment for materials on hand. If this paid invoice is not furnished as provided above, any payment that had been made will be deducted from the current progress estimate until such invoice is furnished. Paid invoices will not be required for materials produced by the Contractor such as sand, gravel, surfacing materials, or aggregates.

Payment for material on hand may include, but not necessarily be limited to the following: sand, gravel, surfacing materials, aggregates, reinforcing steel, bronze plates, structural steel, machinery, piling, timber and lumber (not including forms or falsework), large signs peculiar to the specific project, and prestressed concrete beams or girders. No payment will be made for individual items on hand amounting to less than \$500. Credits equal in amount to the partial payments for the various materials involved will be taken on future estimates as the materials are used in the work.

Partial payment for materials on hand as specified above shall not constitute acceptance, and any faulty material discovered will be rejected even though partial payment may have been made.

#### 1-09.9 Payments

The basis of payment will be the actual quantities of work performed according to the contract and as specified for payment.

Payments will be made for work and labor performed and materials furnished under the contract according to the prices in the proposal unless otherwise provided.

Partial payments will be made once each month, based upon partial estimates prepared by the Engineer. Unless otherwise provided, payments will be made from the Motor Vehicle Fund.

Failure by the Contractor to perform any of his obligations under the contract may be decreed by the State to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all work and after final inspection (Section 1-05.11), the amount due the Contractor under the contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification signed by the Contractor. Such voucher shall be deemed a release

of all claims of the Contractor except such claims, in stated amounts, as are expressly identified and excepted from the Contractor's certification on the Final Contract Voucher Certification. For the convenience of the parties to the contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the State of Washington arising from the contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the contract by the State of Washington; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of Thurston County. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claim or causes of action which the Contractor asserts against the State of Washington arising from the contract are filed with the State or initiated in court, the Contractor shall permit the State to have timely access to any records deemed necessary by the State to assist in evaluating the claims or action.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

#### 1-09.10 Payment for Surplus Processed Materials

After completion of all work under the contract, surplus processed material, produced from State furnished material sources by the Contractor, may be eligible for disposal. The eligible surplus material for disposal shall be limited to:

1. Material in excess of the needs of the contract;
2. Material that has a value of \$3,000 or more as determined by actual production cost;
3. Material that has not been produced on the contract for utilization on other State work not applicable to the contract; and
4. The quantity of material derived by subtracting the actual quantity used on the contract from 110 percent of the plan quantity (or plan quantity adjusted by change order) or the quantity of material derived by subtracting the actual quantity used on the project from the actual quantity produced, whichever is less.

These surplus processed materials may be disposed of by one of the following methods:

1. The Contractor shall first contact the Engineer to determine if the State has a need for the surplus materials either for maintenance purposes or for use on a future contract. If the State agrees to purchase the surplus materials, a price will be negotiated to reimburse the Contractor for his production costs.
2. If the State determines that it does not have a need for the surplus materials, the Contractor may request that these materials be disposed of at public auction. In that event, the State will conduct the auction and return the monetary proceeds to the Contractor after having first deducted the value of the State's unamortized or royalty cost, whichever is greater. The State will also deduct \$500 from the proceeds of the sale for costs incurred by the State to conduct the auction. Under no circumstances will the amount per unit returned to the Contractor be in excess of his unit bid price, if applicable, or his cost of production.

Any surplus material which is not disposed of by one of the above described methods prior to acceptance of the contract by the Secretary or is not eligible

material for disposal shall be left at the site and will remain under State ownership without compensation to the Contractor.

**SECTION 1-01 ACRONYMS, ABBREVIATIONS AND DEFINITIONS**  
(August 11, 1987)

**SECTION 1-01 DEFINITIONS AND TERMS**

Delete the title and content of Section 1-01 in its entirety and replace with the following:

**SECTION 1-01 ACRONYMS, ABBREVIATIONS AND DEFINITIONS (New Section) (9-22-86)**

Standard acronyms, abbreviations, definitions and symbols common to the fields of engineering and construction are used throughout the Contract Documents without further definition. Such use may describe materials, provide dimensions or units of measurement, or identify construction features. A partial listing of acronyms, abbreviations, and definitions most often used in the Contract Documents are included hereinafter. Additional acronyms, abbreviations, definitions, and symbols may also be found in the Project Manual or Drawings. Welding symbols are defined in the current edition of the American Welding Society Structural Welding Code.

When used in the Bid Form to denote items of work and units of measurement, abbreviations are defined to mean the full expression.

When used in the Contract Documents, the following acronyms and words (or pronouns used in place of them) have the indicated meanings unless the context implies otherwise:

- (1) Words in the plural indicate singular and vice versa.
- (2) Words of a particular gender include any gender and genderless words may refer to any gender when the sense so indicates.

**1-01.1 ACRONYMS (New Section) (9-22-86)**

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACSF	Arterial City Street Fund
ADF	Arterial Development Fund
AGA	American Gas Association
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ANCI	American National Standards Institute

APA	American Plywood Association
APWA	American Public Works Association
ARA	American Railway Association
ARMA	Asphalt Roofing Manufacturers Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BR, BROS	Bridge Replacement and Rehabilitation Program
BRM BRS	Bridge Replacement and Rehabilitation Program
CBD	Central Business District
CDBG	Community Development Block Grant
CL	City Light
CLI	Chain Link Institute
CRF	Cumulative Reserve Fund
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DIPRA	Ductile Iron Pipe Research Association
EF, EMGC	Emergency Fund
EPA	Environmental Protection Agency
ER	Emergency Relief Program
FAI	Federal Aid Interstate
FAS	Federal-aid Secondary Program
FASP	Federal-aid Safety Program
FAUS	Federal-aid to Urban Systems
FHWA	Federal Highway Administration
FS	Federal Specifications
FSS	Federal Specifications and Standards, General Services Administration
HEP, HHS	Hazard Elimination Program
HPMA	Hardwood Plywood Manufacturers Association
HUD	United States Department of Housing and Urban Development
IES	Illuminating Engineering Society
LID	Local Improvement District
LPI	Lighting Protection Institute
METRO	Municipality of Metropolitan Seattle
MSHA	Mine Safety and Health Act
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways
NAPA	National Asphalt Pavement Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NIF, NIP	Neighborhood Improvement Program Fund
NRCA	National Roofing Contractors Association
OSHA	Occupational Safety and Health Administration
PORT	Port of Seattle
PPI	Plastic Pipe Institute
PCI	Prestressed Concrete Institute
RCW	Revised Code of State of Washington

RRP, RRS	Railway-Highway Grade Crossing Program
SAE	Society of Automotive Engineers
SBRP	Special Bridge Replacement Program
SED	Seattle Engineering Department
SF	Sewer Fund
SIF	Sewer Improvement Fund
SOS	Safer-Off-System Grant
SSPC	Steel Structures Painting Council
SWD	Seattle Water Department
SWF	Solid Waste Fund
TAN	Targeted Area Neighborhood
TRNF	Transit Fund
UAB	Urban Arterial Board
UATF	Urban Arterial Trust Fund
ULID	Utility Local Improvement District
UMTA	Urban Mass Transit Administration
USACE	United States Army Corps of Engineers
USDOE	United States Department of Energy
WCLGB	West Coast Lumber Grading Bureau
WISHA	Washington Industrial Safety and Health Administration
WRI	Wire Reinforcement Institute
WSDOE	Washington State Department of Ecology
WSDOT	Washington State Department of Transportation

**1-01.2 ABBREVIATIONS (New Section) (9-22-86)**

Abbreviations used throughout the Contract Documents shall be as listed and defined in the Standard Plans.

**1-01.3 DEFINITIONS (New Section) (4-20-87)**

The following terms and their definitions are listed in alphabetical order:

**ACTUAL COMPLETION DATE**

The date certified by the Engineer when the Work, including every item or element, has been satisfactorily completed in accordance with the contract documents.

**ADDENDUM**

Written or graphic instrument, issued prior to the bid opening, which modifies or interprets the bid documents by additions, deletions, clarifications or corrections.

**ADDITIVE**

A supplemental unit of work or group of bid items, identified separately in the Bid Form, which may, at the discretion of the Owner, be awarded in addition to the basic bid amount should sufficient funding be available.

#### ALTERNATE BID

A choice between different methods or materials of construction in the bid form for performing the same work.

#### AUXILIARY LANE

The part of the roadway next to traveled ways for parking, speed changes, turning, weaving, truck climbing or for anything that adds to through traffic movement.

#### AWARD

The formal decision of the Owner to accept the lowest and best bid for the work outlined in the Contract document.

#### BASE COURSE

The layer of aggregate, treated soil, or soil-aggregate which rests upon the subbase or, if no subbase, upon the subgrade.

#### BASIC BID

Basic bid is the summation of bid item extensions in the Bid form, excluding additives, deductives and sales tax.

#### BIDDER

An individual, partnership, firm, corporation, or joint venture, submitting a Bid.

#### BID DOCUMENTS

The advertisement or invitation to bid, instructions to bidders, Bid Form and the proposed contract documents including any addenda issued prior to receipt of Bids.

#### BID, (PROPOSAL)

The written offer of a Bidder, on the prescribed Bid Form properly executed, to perform the work for a specific price. The terms "Bid," "Bid Form," "Proposal," and "Bid Proposal" shall be considered synonymous.

#### BRIDGE

A structure, other than a culvert, over 20 feet in length measured along its centerline, which carries traffic over an obstruction such as a water course, highway, railroad, etc.

## BRIDGE APPROACH EMBANKMENTS

An embankment beneath a structure and extending 100 feet beyond a structure's end (at subgrade elevation for the full embankment width) plus an access ramp on a 10:1 slope to the original ground elevation. Also, any embankment that replaces unsuitable foundation soil beneath the bridge approach embankment.

## CHANGE ORDER

A written order to the Contractor, issued by the Engineer after execution of the contract, authorizing an addition, deletion, or revision in the work, within the scope of the contract documents, and establishing the basis of payment and time adjustments for the work affected by the change.

## COMMISSION, WASHINGTON STATE TRANSPORTATION COMMISSION

Refer to the definition of "Department, Department of Transportation."

## CONSULTANT

A licensed registered Professional engineer or architect or an authorized member of a licensed consulting firm or organization retained by the Owner for design, construction engineering, and/or field inspection of specific public works projects.

## CONTRACT AGREEMENT

The written Contract agreement between the Owner and the Contractor, setting forth the obligations of the parties thereunder including, but not limited to, the performance of the work, the furnishing of materials, the basis of payment, and the contract time.

## CONTRACT AMOUNT

The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

## CONTRACT BOND

The approved form of security, in the form of a payment/performance bond, furnished by the Contractor and the Contractor's Surety.

## CONTRACT DOCUMENTS

All parts of the Contract including, but not limited to, the Bid Form, Agreement, Bonds, insurance certificates, Drawings, Specifications, Addenda, Supplemental Agreements and Change Orders.

## CONTRACTOR

The individual, partnership, firm, corporation, or joint venture, contracting with the State to do prescribed work.

**CONTRACT PRICE**

The total dollar figure representing the proposed cost of the awarded work including basic bid, additives, deductives, alternates, and, if applicable, retail sales tax.

**CONTRACT TIME**

The period of time established in the contract documents specified in calendar days, working days, or by definite completion date, within which the work must be fully completed. The contract time may be increased only through time extensions approved in writing by the Owner.

**CULVERT**

A drainage structure which may or may not directly support traffic, extending across and beneath a highway, street, driveway, alley, or parallel to the roadway in the ditch line.

**CURB**

A vertical or sloping member generally along and defining the edge of a roadway.

**DATE OF FINAL ACCEPTANCE (New Section)**

The date on which the Owner formally accepts the completed work as documented by the Certificate of Completion.

**DAYS**

Unless otherwise designated, days, as used in the contract documents, shall be understood to mean working days.

**DEDUCTIVE**

A supplemental unit of work or group of bid items, identified separately in the Bid Form which may, at the discretion of the Owner, be deducted from the Basic Bid quantities should funding prove insufficient to award the total bid.

**DEPARTMENT, DEPARTMENT OF TRANSPORTATION**

The terms "Department," "Department of Transportation," "Washington State Department of Transportation," "State Department of Transportation," "State," "State of Washington," "Commission," or "Washington State Transportation Commission," shall be construed to mean "Owner," except as follows:

- 1. "State" shall be construed to mean "State of Washington" in the listed sections or as indicated:
  - a. 1-02.7 (Bid Bond)
  - 1-02.14 (Disqualification of Bidders)
  - 1-07.3 (Forest Protection)

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

- 1-07.11(4) (Sanitation)
- 1-07.11(7) (Training and Promotion)
- 1-07.11(8) (Unions)

- b. Whenever the words refer to Agencies or Departments of the State of Washington other than the Washington State Department of Transportation; State sales tax; State employment agencies; State wage rates; and State laws.
  - c. When referring to the Washington State Department of Transportation Laboratory Manual.
2. "State Department of Transportation" means "State Department of Transportation and Owner" in the following sections:
- 1-07.11 (Equal Employment Opportunity Responsibilities)
  - 1-07.11(7) Paragraph 4 (Training and Promotion)
  - 1-07.11(10) Paragraph 2 (Records and Reports)

**EASEMENT**

A legally documented, vested, or acquired right allowing use of land, other than as a tenant, for a specific purpose; such right being held by someone other than the owner who holds title to the land.

**ENGINEER**

The chief executive officer, or authorized assistant, of a City Department or division, who is currently a licensed registered Engineer of the State of Washington, acting directly or through duly authorized representatives in the administrative management of the Contract.

**EQUIPMENT**

The machinery, tools, implements, apparatus, and appliances, together with the necessary supplies for their upkeep and maintenance, which are necessary to enable the Contractor to perform the agreed services.

**FEDERAL HIGHWAY ADMINISTRATION**

The Federal Agency authorized to approve plans and contracts for Federal Aid Highway projects. They also inspect such projects to ensure contract compliance.

**FRONTAGE ROAD**

A local street or road usually next to an arterial highway that serves abutting property and adjacent areas and controls access.

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## HIGHWAY (ARTERIAL)

Any U.S. or numbered route, controlled access highway, or other major radial or circumferential street or highway designated by local authorities within their respective jurisdiction as part of a major arterial system of streets or highways.

## HIGHWAY (STREET, ROAD, ALLEY)

The entire width between the boundary lines of every way, publicly maintained, when any part thereof is open to the use of the public for purpose of vehicular travel.

## HOLIDAYS

Recognized holidays shall be the following State legal holidays: Sundays; the first day of January (New Year's Day); the third Monday in January (Martin Luther King, Jr's birthday); the twelfth day of February (Abraham Lincoln's birthday); the third Monday of February (George Washington's birthday); the last Monday of May (Memorial Day); the fourth day of July (Independence Day); the first Monday in September (Labor Day); the eleventh day of November (Veteran's Day); the fourth Thursday in November (Thanksgiving Day); the day immediately following Thanksgiving Day; and the twenty-fifth day of December (Christmas Day).

If any recognized State holiday is also a legal Federal holiday but observed on a different date, only the State holiday shall be considered a non-working day.

Whenever any recognized State holiday, other than a Sunday, falls on a Sunday, the following Monday shall be a non-working day. Whenever any recognized State holiday falls on a Saturday, the preceding Friday will be a holiday for Owner employees only, and shall be a working day with respect to the contract time.

## INTERSECTION

- a. The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two highways which join one another at, or approximately at, right angles, or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict.
- b. Where a highway includes two roadways 30 feet or more apart, then every crossing of each roadway of such divided highway by an intersecting highway shall be regraded as a separate intersection. In the event such intersecting highway also includes two roadways 30 feet or more apart, then every crossing of two roadways of such highways shall be regarded as a separate intersection.
- c. The junction of any alley with a highway shall not constitute an intersection.

**INSPECTOR (ASSISTANT)**

The Engineer's authorized representative assigned to make detailed inspection of the work. (Also see the definition of "Engineer.")

**LABORATORY**

All references to laboratories of the Department of Transportation shall be construed to mean the Materials Laboratory of the Owner or other laboratories authorized by the Owner.

**MAJOR BID ITEM**

Any bid item, unless specifically excluded in the Special Provisions, for which the unit price extension is 10 percent or more of the total contract price as determined by the original estimated quantities and unit contract prices.

**MATERIAL**

Any substance specified for use in the construction of the project and its appurtenances which enters into and forms a part of the finished structure or improvement and is capable of being so used and is furnished for that purpose; only that material for which a mechanic's lien can be filed.

**MATERIALMAN**

One who furnishes a raw material, supply, commodity, equipment, or manufactured or fabricated product and does not perform labor at the project work site.

**NEW SECTION**

"New Section" appearing in the Section title of the Supplement is intended to identify those Sections which are completely new or whose text and title as shown in the Standard Specifications have been totally detailed and replaced with what is shown in the Supplement.

**NON-WORKING DAYS**

Saturdays; recognized State holidays; days on which the Contractor is specifically required by the Special Provisions to suspend work; days on which a suspension order is in effect as set forth in Section 1-08.6 paragraph 1, Condition (1).

**NOTICE OF AWARD**

The written notice from the Owner to the successful Bidder indicating the Owner's acceptance of the bid, plus the Contract Price.

**NOTICE TO PROCEED**

The written notice from the Engineer to the Contractor authorizing the Contractor to proceed with the work and establishing the date on which the contract time begins.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

**NOTICE TO PROCEED DATE**

The calendar date stated in the Notice to Proceed on which the contract time begins.

**OWNER**

The City of Seattle, acting through its Board of Public Works as represented by the Engineer, and such other authorized officers, employees or agents. (Also see the definition of "Engineer.")

**PAVEMENT**

The uppermost layer of material placed on the traveled way or shoulders for riding surface, generally rigid or flexible in composition.

**PLANS (DRAWINGS)**

A graphical presentation of the construction project; plan views, profiles, cross sections, supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of the work to be done.

The term "Drawings," "Plans," "Engineer's Plans," and "Engineer's Drawings" shall be considered synonymous.

**PROJECT ENGINEER**

The term "Project Engineer" shall be construed to mean "Engineer."

**PROJECT MANUAL**

The compilation of written project provisions and requirements including, but not limited to, the Bidding Requirements, Bid Form, Agreement, Special Provisions, and Addenda.

**RIGHT OF WAY**

Land, property, or property interest, usually in a strip, acquired for or devoted to transportation, utility lines, drainage, or other public purposes.

**ROADBED**

The graded part of the roadway within top and side slopes prepared as a foundation for the pavement structure and shoulders.

**ROADWAY**

The portion of the right of way within the outside limits of the side slopes, used for vehicular travel.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

## SECRETARY, SECRETARY OF TRANSPORTATION

The terms "Secretary" and "Secretary of Transportation" shall be construed to mean "Engineer" except in the following sections where "Secretary" and "Secretary of Transportation" shall mean "Owner":

1-04.8	(Progress Estimates and Payments)
1-07.13	Paragraph 1 (Contractor's Responsibility for Work)
1-08.5	(Time for Completion)
1-08.10(1)	(Termination for Default)
1-08.10(2)	(Termination for Public Convenience)
1-08.10(4)	(Arbitration of Disputes)

### SHOULDER

The part of the roadway next to the traveled way. It provides lateral support of base and surface courses and is an emergency stopping area for vehicles.

### SPECIAL PROVISIONS

Additions, deletions and other revisions to the Standard Specifications and Supplemental Specifications which specify requirements unique to a particular project.

### SPECIFICATIONS

The compilation of written provisions and requirements for the performance of prescribed construction work. Specifications include the Standard Specifications, Supplemental Specifications, Special Provisions, Traffic Control Manual for In Street Work and all other written requirements including notes and comments found on the Drawings.

### STANDARD PLANS

The City of Seattle Standard Plans, which show frequently recurring components of public works improvements used by the City of Seattle.

### STANDARD SPECIFICATIONS

The current edition of the "Standard Specifications for Road, Bridge, and Municipal Construction" published by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter.

### STATE

The term, "State" shall be construed to mean, "Owner except as noted under, "Department, Department of Transportation" of this section.

## STATE APPRENTICESHIP AGENCIES COUNCIL

References to the State Apprenticeship Agencies Council, or programs shall mean the Washington State Apprenticeship Agency Council, or programs.

### STRUCTURES

Bridges, culverts, walls, buildings, foundations, water tanks, transmission towers, cribbing, caissons, or cofferdams, and other similar features which may be encountered in the work and not classified in the contract.

### SUBBASE

The layer in a pavement system immediately above the subgrade and below the base course.

### SUBCONTRACTOR

An individual, firm, partnership, corporation, or joint venture to whom the Contractor, with the written consent of the Owner, sublets part of the contract.

### SUBGRADE

The top surface of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

### SUBSTANTIAL COMPLETION

When the work (or a specific part thereof) has progressed to a point where, in the opinion of the Engineer as evidenced by written notice to the Contractor, it is sufficiently complete, in accordance with the contract documents, so that the work (or a specific part thereof) can be utilized for the purpose for which it was intended even though comparatively minor items need to be furnished or performed in order to fully comply with the contract documents. The terms "substantially complete" and "substantially completed" as applied to any work refer to substantial completion thereof. The date of substantial completion shall be the date set forth in the written notice of substantial completion.

### SUBSTRUCTURE

The part of the structure below:

1. Simple and continuous span bearings, or
2. Arch skewbacks and construction joints at the top of vertical abutment members or rigid frame piers.

Substructures include backwalls, wingwalls and wing protection railings.

## SUPERSTRUCTURE

The part of the structure above:

1. Simple and continuous span bearings, or
2. Arch skewbacks and construction joints at the top of vertical abutment members or rigid frame piers.

Superstructures do not include backwalls, wingwalls, and wing protection railings unless supported by the superstructure.

## SUPPLEMENT TO STANDARD SPECIFICATIONS

The Supplement to Standard Specifications, adopted by the Seattle Board of Public Works, generally includes alterations and new construction items, or substantial changes in the Standard Specifications.

## SUPPLIES

Any substance used or consumed in the construction of the project and its appurtenances which does not become part of the structure or improvement.

## SURETY

A person or company that is responsible for the bidder's execution of the contract and contract bond, or is bound with the Contractor to ensure performance of the contract, payment of all obligations pertaining to the work, and fulfillment of such other conditions as are specified in the contract, contract bond, or otherwise required by law.

## TRAFFIC CONTROL DEVICES

Fixed or portable signs, signals, street lights, barricades, guard rails, pavement markings, channelization and other equipment or materials used for the purpose of regulating, warning and guiding traffic.

## WORK

The provision of all labor, materials, equipment, and everything needed to successfully complete a project according to contract specifications.

## WORKING DAYS

Any day not otherwise defined as a non-working day, except that a Saturday or holiday worked by a Contractor or subcontractor may, at the option of the Engineer, be considered a working day with respect to contract time.

## WORKING DRAWINGS

Shop drawings, erection plans, falsework plans, framework plans, cofferdam, cribbing and shoring plans, bending diagrams for reinforcing steel, or any other

supplementary plans or similar data which the Contractor must submit to the Engineer for approval.

**WRITTEN NOTICE**

Any notice in writing to any party of the contract relative to any part of the contract documents. Written notice is considered delivered and the service thereof completed when posted by certified or registered mail to the said party at the last given address, or delivered in person or to an authorized representative of said party on the project.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

**SECTION 1-02 BID PROCEDURES AND CONDITIONS**  
(August 11, 1987)

**1-02.1 PREQUALIFICATIONS OF BIDDERS (10-21-85)**

Delete this section and replace with the following:

Bidders shall be qualified by experience, financing, equipment and organization to do the work called for in the contract documents. The Engineer reserves the right to take whatever action it deems necessary to ascertain the ability of the Bidder to perform the work satisfactorily. This action may include a prequalification procedure prior to the Bidder being furnished a Bid Form for any contract or a pre-award survey of the Bidder's qualifications prior to award.

When prequalification is required, by law or by the Engineer, or pre-award information is requested by the Engineer, the Bidder shall submit on a standard form or questionnaire or on a form provided by the Engineer, whichever is applicable, a current financial statement; a statement of the contractor's construction experience, equipment and organization; and such additional information as may be specified or will assist the Engineer in ascertaining the Bidder's general ability to perform the work. Such questionnaire shall be sworn to before a notary public or other person authorized to take acknowledgement of deeds, and shall be submitted to the Engineer at such times as the Owner may require. The Invitation to Bid will indicate whether contract prequalification is required of Bidders. If the Invitation to Bid requires prequalification, the Owner will reject a Bid from any Bidder that has not become prequalified before the date fixed for opening of bids for the contract on which the Bid was submitted.

If two or more prospective Bidders desire to prequalify and bid jointly as a joint venture on a single contract, each must have filed the standard questionnaire and financial statement and they must also file a standard form questionnaire and financial statement for the joint venture. A copy of the joint venture agreement shall be attached to the joint venture questionnaire. Joint ventures will be treated as a new firm, and as such, joint ventures and any of its members will be subject to Section 1-02.14 (Disqualification of Bidders). Any agreement to joint venture required to be filed shall be signed by each of the joint venture members and must specify each individual who is authorized to execute bids, contracts, bonds, and other documents on behalf of the joint venture. If any of the joint venture members is a corporation, the agreement must be accompanied by a resolution of the corporation, authorizing such joint venture agreements, and designating the officer or officers authorized to sign such joint venture agreement or contract on behalf of such corporation.

The Engineer may qualify a Bidder as to the type of work and the amount of work for which a Bidder is deemed qualified. The Engineer may also reduce the amount for which a Bidder is prequalified, or withdraw prequalification if the Engineer feels that such reduction or withdrawal is justified because of work the Bidder

has under contract, yet to be accomplished, whether with the Owner or with others, or because of unsatisfactory performance on a past or current Owner contract.

If the Engineer is not satisfied with the sufficiency of the answers contained in the questionnaire and financial statement, the Engineer may refuse to furnish a prospective Bidder a Bid Form, and any Bid Form submitted by such Bidder shall be disregarded. Such refusal shall be conclusive, unless appeal to the Board of Public Works results in the Engineer's decision being overturned.

When submitting a Bid, it shall be the responsibility of the Bidder to determine that the amount of the Bid, plus the amount of outstanding work with the Owner and with others combined, does not exceed the amount of the Bidder's authorized prequalification capacity. If the amount of a Bid submitted by a Bidder, in addition to the amount of any outstanding work the Bidder has under contract with the Owner and others, would exceed the Bidder's authorized prequalified amount, the Owner may determine that the Bidder is not a responsible Bidder insofar as performance of the proposed contract is concerned, and may not award the contract to the Bidder.

1-02.2 PLANS AND SPECIFICATIONS (9-24-85)

Delete this section and replace with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the advertisement for the work placed in the City of Seattle's official newspaper. Additional locations may also be listed in the Project Manual.

1-02.5 PROPOSAL FORMS (6-21-85)

Delete this title and section, and replace with the following:

1-02.5 BID FORM (New Section) (6-21-85)

Upon request, a Bid Form will be furnished to a qualified Bidder for projects for which he is eligible to bid. The Bid Form will identify the project, its location and describe the work. It will list the estimated quantities, the units of measure, the items of work, and the materials to be furnished at the unit bid prices. Spaces to be filled in by the Bidder are provided on the Bid Form for unit prices, extensions, the total bid amount, signatures, date, acknowledgment of addenda, and name and address of the Bidder. Required certifications are included as appropriate as a part of the Bid Form.

1-02.6 PREPARATION OF PROPOSAL (4-20-87)

Supplement this section with the following:

All unit prices and lump sum prices except totals shall be expressed in both words and figures on the bid form, and shall be legible and be in black ink or typed.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

If the Owner should so require, evidence of legal authority to sign shall accompany the Bid or be on file with the Owner.

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the bid documents, the Bidder may submit to the Engineer a written request for an interpretation. If warranted by the Engineer an interpretation of the proposed contract documents will be made by an addendum duly issued, and a copy of such addendum will be mailed or delivered to each person receiving a set of the bid documents. Each Bidder shall acknowledge receipt of each addendum received in order to have the Bid considered. The Owner will not be responsible for any other explanations or interpretations of the proposed contract documents during the advertisement period.

No verbal agreement or conversation with any officer, agent or employee of the Owner, either before or after execution of the contract, shall effect or modify any of the terms or obligations contained in any of the documents comprising the contract. Any such verbal contract shall be considered as unofficial information and in no way binding upon the Owner.

*VIC* 1-02.8 NON-COLLUSION CERTIFICATE (4-20-87)

Delete this section and replace with the following:

The Bidder shall certify that he has not participated in collusion or other action in restraint of competitive bidding. Each Bidder shall file a sworn statement executed by, or on behalf of the person, firm, association, or corporation submitting the Bid, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted Bid. This sworn statement shall be in the form of an affidavit executed and sworn to by the Bidder before a person who is authorized by the laws of the State to administer oaths. The required form for the affidavit will be provided by the Owner to each prospective Bidder.

By signing the Proposal, the Bidder will be deemed to have signed and agreed to the provisions of the Non-Collusion Certificate.

*MIC* 1-02.9 DELIVERY OF PROPOSAL (9-24-85)

Delete this section and replace with the following:

Each Bid shall be sealed in a separate envelope, properly addressed to the Owner at the address indicated in the Invitation to Bid or Instructions to Bidders. The Owner's address, the name and address of the Bidder, and the name of the project for which the Bid is submitted shall be clearly written, printed or typed on the outside of the envelope. Where envelopes are furnished, or forwarded to the Bidder by the Owner, and which may include preprinted information requiring the Bidder's attention and the filling in of certain required information, the Bidder shall complete all blanks.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Bids that are not received by the Owner before the time fixed for opening of bids in the Invitation to Bid may not be considered.

**1-02.10 WITHDRAWAL OR REVISION OF PROPOSAL (6-21-85)**

Supplement this section with the following:

After the closing time for receipt of Bids, a Bidder will be permitted to withdraw a Bid only if a Bidder's claim of error is upheld by the Owner, or the award is delayed for a period exceeding that set forth in Section 1-03.2.

**1-02.11 COMBINATION AND MULTIPLE PROPOSALS (6-21-85)**

Delete this title and section, and replace with the following:

**1-02.11 ADDITIVES, ALTERNATES, DEDUCTIVES (New Section) (6-21-85)**

The Owner reserves the right to arrange the Bid Form with alternates, additives, or deductives, if such be to the advantage of the Owner. If the Bid Form sets forth additives or deductives, the Bidder shall bid on all additives or deductives provided therein. If the Bid Form sets forth alternates, Bids may be submitted on the Basic Bid, the Alternate Bid, or both Basic and Alternate Bids at the discretion of the Bidder.

**1-02.13 IRREGULAR PROPOSALS (6-21-85)**

Delete item 1(e) and replace with the following:

1(e) The Bidder is required to be prequalified, and has not been prequalified prior to bid submittal;

Supplement this section to include item 1(g) as follows:

1(g) The Bidder did not bid on all additives or deductives.

**1-02.14 DISQUALIFICATION OF BIDDERS (6-21-85)**

Delete subparagraphs (c) and (d) of this section and replace with the following:

(c) A Bidder, in the opinion of the Engineer, is not qualified for the work involved, or as to the extent that the bid exceeds the authorized prequalification amount as determined by a prequalification or pre-award evaluation of the Bidder;

(d) An unsatisfactory performance record exists as shown by past or current work for the Owner or for others as judged from the standpoint of conduct of work; workmanship; progress; affirmative action; equal

employ t opportunity practices; or disadvantaged Bid , minority  
business enterprise, or woman business enterprise utilization.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
IT IS DUE TO THE QUALITY OF THE DOCUMENT.

SECTION 1-03 AWARD AND EXECUTION OF CONTRACT  
(August 11, 1987)

NIC 1-03.1(1) BIDDING ERRORS (New Section) (6-21-85)

If after bid opening, a Bidder claims error and requests to be relieved of award, the Bidder shall, by 5:00 p.m. on the following business day, present the Owner certified original work sheets documenting the error. The work sheets and other documentation provided by the Bidder will be reviewed to determine the validity of the claim. If the Owner is convinced that an honest allowable (excusable mathematical) error has been made, the Bidder will be relieved of the responsibility and the Bid Bond returned. At the discretion of the Owner, award may be made to the next low responsive Bidder, or all Bids may be rejected, and the project readvertised. If readvertised, the Owner may prohibit the Bidder claiming error from rebidding the project.

NIC 1-03.2 AWARD OF CONTRACT (9-24-85)

Delete this section and replace with the following:

A contract will normally be awarded or Bids rejected within 60 calendar days after the Bids are opened. Upon mutual consent of the lowest responsible bidder and the Owner, the 60 calendar day limit may be extended. The successful bidder will be notified in writing when awarded the contract.

NIC 1-03.3 EXECUTION OF CONTRACT (6-21-85)

Delete paragraph 1 and replace with the following:

The successful Bidder shall sign and return the contract furnished by the Owner within 10 calendar days after the day of award. Pre-award information requested under provisions of Section 1-02.15 shall be provided by the Bidder prior to contract execution.

NIC 1-03.4 CONTRACT BOND (6-21-85)

Delete paragraph 1 and replace with the following:

The successful Bidder shall furnish all required bonds fully executed within 10 calendar days after the date of award, on a form approved by the Owner and signed by an approved surety or sureties, in the full amount of the contract price. The bond shall identify the Owner, Contractor, Surety, project name, and dollar amount. The bond shall be conditioned upon the faithful performance of the contract by the Contractor within the prescribed time. The bond shall provide that the surety agrees to protect and indemnify the Owner against any direct or indirect loss claimed by reason of failure by the Contractor or any of the Contractor's employees, subcontractors, or agents to faithfully perform the

contract; and b. reason of failure by the Contractor to pay a laborers, mechanics, subcontractors, agents, materialmen, and all persons who shall supply such Contractor, subcontractor, or agents with provisions or supplies for carrying on the work.

1-03.5 FAILURE TO EXECUTE CONTRACT (6-21-85)

Delete this section and replace with the following:

If the successful Bidder fails to sign and return the contract, and furnish satisfactory bond and insurances within 10 calendar days from the date of award, or refuses in writing to enter into the contract, the successful Bidder's bid bond or deposit shall be forfeited. The Owner may then award the contract to the second lowest responsible Bidder. If the second lowest responsible Bidder fails to enter into the contract, and furnish satisfactory bond and insurances within 10 calendar days after award has been made to the second Bidder, the second Bidder's bid bond or deposit shall also be forfeited. The contract may be awarded successively in a like manner to the remaining lowest responsible Bidders until the contract and bond are executed and insurances furnished by a responsible Bidder, or the remaining bids are rejected.

The time for the successful Bidder to sign and return the contract and furnish satisfactory bond may be extended to the maximum amount allowed by law if requested by the Bidder, and the Owner deems circumstances warrant an extension.

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SECTION 1-04 SC. 2 OF WORK  
(August 11, 1987)

*NIC*  
1-04.2 COORDINATION OF CONTRACT DOCUMENTS, PLANS, SPECIAL PROVISIONS,  
SPECIFICATIONS, ADDENDA (4-20-87)

Delete paragraph 2 and replace with the following:

In the event of any conflicting provisions or requirements between the component parts of this contract, the component parts shall take precedence in the following order:

- (1) Form of Contract
- (2) Addenda, as may be issued
- (3) Permits and regulations from other governmental agencies as may be required by law
- (4) Special Provisions
- (5) Engineer's Drawings
- (6) Standard Plans
- (7) Supplemental Specifications
- (8) Standard Specifications

The Contract shall be composed of each and every one of the above listed component parts and all revisions thereto. When appearing on the Drawings, dimensions denoted by actual figures shall govern over scaled dimensions. Change orders, supplemental agreements or other revisions to the Drawings and Specifications will take precedence over the documents listed above.

*NIC*  
1-04.6 INCREASED OR DECREASED QUANTITIES (03-17-86)

Supplement the last paragraph with the following:

When an amount for any contract item has been entered solely for the purpose of providing a common bid for all Bidders, such items shall not be considered major contract items.

*MC*  
1-04.10 USE OF MATERIALS FOUND ON THE PROJECT (03-17-86)

Delete this section and replace with the following:

Upon written approval of the Engineer, the Contractor may use on the project any stone, gravel, sand or other material obtained in the required excavation, or any timbers removed in performing the work, provided that such materials satisfy the requirements of the contract and are not required for other use under the contract or as Selected Materials. In no event will such use be permitted to the detriment of the Owner.

Disposition of suitable materials obtained in the course of the work shall be as follows per the Engineer's direction:

- (a) Use as Selected Material per Section 2-03.3(10).
- (b) Deliver to the Engineer as salvage per Section 2-02.3(7).
- (c) Waste and dispose of per Section 1-04.12.

*NIC* 1-04.11 FINAL CLEANUP (6-21-85)

Supplement this section with the following:

On all concrete and asphalt pavement work, the Contractor shall, before final acceptance of the work, flush the pavement clean and remove the debris. He shall also clean out all open culverts and drains, inlets, catch basins, manholes and water main valve chambers, within the limits of the project, of dirt and debris of any kind which is the result of the Contractor's operations. The cleaning and disposal of such waste material shall be considered as incidental to the construction and all costs thereof shall be included in the unit contract prices of various items of the work.

1-04.12 BORROW AND WASTE SITES (New Section) (10-21-85)

Unless otherwise specified in the Project Manual, waste sites shall be provided by the Contractor. Borrow and waste sites shall be operated in such a manner as to meet the grading, safety and health requirements of the State, county and local political subdivision. Sites, operations, or results of such operations, which create a definite nuisance problem, or which result in damage to public or private properties will not be permitted.

*NIC* Copies of permits for borrow and waste sites, and reclamation plans for pits shall be furnished to the Engineer by the Contractor.

*NIC* The Contractor shall submit to the Engineer at the pre-construction conference a list of waste and borrow sites the Contractor proposes to use during the course of construction. The list shall identify, in addition to each location, the estimated quantities and type of material to be wasted at, or removed from, each site. Should additional or alternate sites become necessary during the life of the contract, the locations and preceding information for each site shall be submitted to the Engineer for approval, prior to their use.

*NIC* Waste and borrow sites and their operation shall be at all times subject to the Engineer's approval. No waste or borrow site shall be utilized by the Contractor until the proper grading permits and property owner agreements have been obtained by the Contractor and copies submitted to the Engineer. Sites utilized by the Contractor without a legal grading permit, an agreement from the property owner, and approval of the Engineer will be considered unauthorized.

Waste and borrow sites located within the City limits of Seattle are subject to the rules and regulations set forth in Seattle Grading and Drainage Control Ordinance (Ord. No. 108080 as amended by Ord. No. 111043, or as otherwise provided in the Seattle Municipal Code 22.800) and shall require a grading permit issued to the property owner by the Director of Construction and Land Use.

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Waste and borrow sites located outside the City limits of Seattle but within unincorporated King County, shall be subject to the rules and regulations set forth in the King County Grading Ordinance (Ord. No. 1488). Sites may also be subject to rules and regulations of a local governmental authority if located within their jurisdiction.

Surplus material shall not be wasted within the public rights of way without a grading permit and, if within the City limits of Seattle, a street use permit issued by the Director of Engineering.

Upon completion of the work and before final acceptance and payment, the Contractor shall clean up all properties and sites on which the Contractor has operated. The Contractor shall perform all operations necessary to put the sites in a neat, clean and orderly condition.

Final cleanup shall be in accordance with the requirements specified in the Grading Ordinance, permits, property agreements and other contract documents. Upon completion of grading operations at any site for which a written agreement between the Contractor and property owner is required, the Contractor shall obtain and furnish to the Engineer a release from all damages, duly executed by the property owner, stating that the restoration of the property has been satisfactorily accomplished. Retainage withheld from the Contractor's payments will not be released until all such property owner releases have been furnished to the Engineer. Should the release be, in the opinion of the Owner, arbitrarily withheld, then the Owner may, in its sole discretion, accept that portion of the work involved and cause final payment to be made.

All costs and expenses involved in securing, operating and maintaining any waste or borrow site (including final cleanup and any erosion or anti-pollution controls required in the permits, property owner agreements, grading regulations, and other contract documents will be considered as incidental to the contract and such costs and expenses shall be included in the contract prices for the various pay items shown in the Bid Form.

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SECTION 1-05 CONTROL OF WORK  
(August 11, 1987)

1-05.3 PLANS AND WORKING DRAWINGS (4-20-87)

The third and fourth paragraphs are revised to read:

The Contractor shall submit supplemental working drawings that are required for the performance of the work. Supplemental working drawings shall be on 24 inch by 36 inch sheets or on small sheets with dimensions in multiples of 8-1/2 by 11 inches. The Engineer's written approval of the drawings shall be obtained before any work is done as proposed by the drawings.

Supplement this section with the following sub-sections:

1-05.3(1) SHOP DRAWINGS (New Section) (11-28-85)

Shop drawings shall be provided for all substitutions and items submitted as "or equal" per Section 1-06.3, and for any other items of work which do not conform to the Contract Documents or Standard Plans.

For shop drawings on concrete structures, see Section 6-02.3(26)A.

The term "working drawings" or "shop drawings" includes shop details, diagrams, layouts, schematics catalog cuts, descriptive literature, illustrations, schedules, performance and test data, and similar information furnished by the Contractor or the Contractor's material supplier or manufacturer to explain in detail those specific portions of the work required by the contract.

For shop drawings that are 8-1/2 x 11 inches, 8-1/2 x 14, or 11 x 17 inches in size, the Contractor need submit only one drawing; for all other sizes the Contractor shall submit one reproducible original or 6 reproductions. One reproducible original shall be cloth or mylar tracings. Other types of reproducibles will be accepted provided they are clear, suitable for microfilming and on a permanent type of material (e.g. reprographic mylar base film).

Each drawing shall have clear space for the Engineer's review stamp and comments. The Engineer will indicate his review of the shop drawings in the space provided. If modifications are requested, the Engineer will so indicate. If 6 reproductions are submitted, the original and 2 copies of the shop drawings will be returned to the Contractor after review. However, if 1 set of reproducibles is submitted, only that set of reproducibles of the shop drawings will be returned.

Where shop drawings are required for a series of similar items listed in the Bid Proposal, such as Poles, Bracket Arms, etc., separate shop drawings shall be submitted for each individual bid item. In no case will shop drawings be accepted where 2 or more bid items are combined into one sketch.

1-05.3(2) SUBMITTAL CONTROL DOCUMENTS (New Section) (8-28-86)

The Contractor shall prepare and submit to the Engineer within 15 working days after receipt of notice to proceed, a Submittal Control Document in duplicate, listing all items for which shop drawings are required. The document shall be organized by specification section number and shall include the following information for all listed items:

- (1) Shop drawing number
- (2) Identify bid item for which shop drawing represents.
- (3) Identification of those items which are "or equal" substitutions
- (4) Name and address of manufacturer
- (5) Trade name, model and catalog designation
- (6) Manufacturer's performance and test data and reference standard
- (7) The scheduled need dates for control purposes
- (8) Date Submitted
- (9) The date approval is needed.
- (10) The date the material is needed by.

The Submittal Control Document shall be coordinated with the approved progress schedule. The Contractor shall allow 10 days for Engineer's review and approval. If rejected by the Engineer, the Contractor shall re-submit the document allowing an additional 10 days for each review required until approved by the Engineer. The data in the Submittal Control Document shall not relieve the Contractor of his obligation to comply with all the specification requirements regarding time for completion. The Contractor shall review the Submittal Control Document at least every 30 days and take appropriate action to maintain an effective system. Copies of updated or corrected Submittal Control Document shall be submitted to the Engineer every 60 days.

The Contractor shall coordinate assembly of all shop drawings and label with reference to project name, specification section or Engineer's drawing number or both, detail number, location on the project, Contractor's name and address, delivery date and all pertinent data needed. The Contractor shall review shop drawings for accuracy, completeness and compliance with contract requirements before submission to the Engineer, and a stamp indicating his approval shall be provided on the drawings as evidence of such review. If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing by a letter accompanying the drawings at the time of submission. Shop drawings submitted for review which are determined by the Engineer to be carelessly prepared, erroneous, incomplete, illegible, not to scale, or lacking the Contractor's approval will be returned to the Contractor for correction, rechecking, and resubmission.

1-05.4 CONFORMITY WITH PLANS, STAKES, AND DEVIATIONS THEREFROM (6-21-85)

Delete paragraph 1 and replace with the following:

The Contractor's work shall be governed by the lines, grades, and cross-sections provided by the Engineer in laying out and staking the work.

1-05.5 CONSTRUCTION STAKES (10-21-85)

*Delete paragraph*  
Delete paragraph 3 and replace with the following:

Stakes, marks, and other reference points, including existing monumentation set by Owner forces, shall be carefully preserved by the Contractor. The Contractor shall be charged for the costs of necessary replacement of stakes, markers and monumentation destroyed or damaged by the Contractor's operations. This charge will be deducted from monies due or to become due to the Contractor.

Any claim by the Contractor for extra compensation by reason of alterations or reconstruction work allegedly due to error in the Engineer's line and grade, will not be allowed unless the original control points set by the Engineer still exist, or unless other satisfactory substantiating evidence to prove the error is furnished the Engineer. Three consecutive points set on line or grade shall be the minimum points used to determine any variation from a straight line or grade. Any such variation shall, upon discovery, be reported to the Engineer. In the absence of such report the Contractor shall be liable for any error in alignment or grade.

The Contractor shall provide all surveys required other than those to be performed by the Engineer.

*NIC*  
~~The Contractor's surveyor shall be a licensed surveyor or licensed engineer in the State of Washington.~~ The Contractor shall keep updated survey field notes in a standard field book and in a format set by the Engineer. All survey field notes shall be submitted to the Engineer for review at least 24 hours before the intended work begins. Upon completion of the project, such field note shall become the property of the Engineer.

If the survey work provided by the Contractor does not meet the standards of the Engineer, then the Contractor shall, upon the Engineer's written request, remove the individual or individuals doing the survey work and the survey work will be completed by the Engineer at the Contractor's expense. Costs for completing the survey work required by the Engineer will be deducted from monies due or to become due the Contractor.

→ All costs for survey work required to be performed by the Contractor shall be included in the prices *agreed to* bid for the various items which comprise the *work* improvement.

1-05.5(1) ROADWAY AND UTILITY SURVEYS (New Section) (10-21-85)

The Engineer will furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for proper prosecution of the work. These shall generally consist of: one initial set of slope stakes for cuts and fills, one set of curb grade stakes, one set of centerline finish grade stakes on pavement sections wider than the standard 25 foot roadway, and controls for underground pipeline utilities including sewers, storm drains, and water mains. Grades and manhole locations for underground facilities will be furnished by providing offset stakes or marks. The Contractor shall be responsible for transferring grades to the bottom of the trench.

On projects with alley construction with minor grade change, the Contractor will be given offset hubs on one side of the alley to establish the limits for grading and paving elevations. Alleys with major grade changes, as determined by the Engineer, will be supplied slope stakes on centerline cut and fill stakes.

1-05.5(2) BRIDGE AND STRUCTURE SURVEYS (New Section) (6-21-85)

For all structural work such as bridges and retaining walls, the Contractor shall retain an experienced team of surveyors ~~under direct supervision of a~~ <sup>NIC</sup> ~~licensed surveyor~~ as a part of Contractor organization. The Contractor shall insure that required field measurements and locations, match and fulfill the intended plan dimensions. The Contractor shall provide all surveys required to complete the structure, except the following primer points which will be provided by the Engineer.

- (a) Roadway centerline for the structure
- (b) Stations of abutments and pier centerlines
- (c) A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances
- (d) Monuments and control points as shown on the Drawings.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

- (a) Stationing  $\pm$  .01 foot
- (b) Alignment  $\pm$  .01 foot (between successive points)
- (c) Superstructure Elevations  $\pm$  .01 foot (from plan elevations)
- (d) Substructure Elevations  $\pm$  .05 foot (from plan elevations)

During the progress of construction, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measures with appropriate dimensions of structural members being fabricated.

1-05.10 GUARANTY (6-21-85)

Delete this section and replace with the following 2 subsections:

1-05.10(1) GENERAL GUARANTIES AND WARRANTIES (New Section) (6-21-85)

The Contractor shall furnish to the Engineer any guaranty or warranty furnished as a normal trade practice in connection with the purchase by the Contractor or any subcontractor of any equipment, materials, or items used in the construction of the project.

~~On non-federally funded projects if,~~ Within one year after final acceptance of the project or such longer period of time as may be prescribed by law or by the terms of any applicable special guaranty set forth in the contract documents or by any specific revision of the contract documents, any work is found to be defective, the Contractor shall promptly, without cost to the Owner, and in accordance with the Engineer's instructions, either correct such defective work, or if the defective work has been rejected by the Engineer, remove it from the site and replace it with nondefective work. If the Contractor does not promptly comply with the terms of such instructions, or if an emergency exists where the delay could cause serious risk of loss or damage, the Owner may have the defective work corrected or rejected work removed and replaced and all direct and indirect costs of such correction or removal and replacement including compensation for additional professional services shall be borne by the Contractor.

1-05.10(2) WARRANTY OF TITLE (New Section) (6-21-85)

No materials, supplies, or equipment for the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller, materialman, or the supplier. The Contractor shall warrant good title to all materials, supplies, and equipment purchased for or incorporated in the work. Nothing contained in this paragraph however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner.

The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

1-05.11 FINAL INSPECTION (9-04-86)

Delete this section and replace with the following 2 subsections:

1-05.11(1) SUBSTANTIAL COMPLETION DATE (New Section) (9-04-86)

When the Engineer considers the Work substantially complete the Engineer will establish a Date of Substantial Completion.

*NSC*  
In addition, the Engineer will notify the Contractor of major items of work requiring completion or correction. The Work shall be pursued vigorously until complete within the stipulations of Section 1-08.5. The Engineer will not make the final inspection until all work, including the correction of such deficiencies, final cleanup, and such extra work as may be ordered by the Engineer has been completed by the Contractor and all subcontractors.

1-05.11(2) FINAL INSPECTION DATE (New Section) (9-04-86)

The Engineer will set a Date for Final Inspection after the Contractor has completed the major work items listed by the Engineer when the Substantial Completion Date was established. The Engineer and the Contractor will then make a final inspection of the Work. If there are no deficiencies the Work will be considered complete and the Engineer will recommend acceptance of the Work to the Owner.

If there are deficiencies the Engineer will notify the Contractor, in writing, with a Final Punch List of all particulars in which this inspection revealed the Work incomplete or defective. The Contractor shall vigorously pursue completion of these deficiencies. If the Contractor fails to vigorously pursue completion of the deficiencies the Owner may, 10 days after giving notice to the Contractor, correct those deficiencies pursuant to Section 1-05.8.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Owner, in writing, of the Actual Completion Date.

1-05.12 FINAL ACCEPTANCE (9-24-85)

Delete this section and replace with the following:

A Certificate of Completion for the project, submitted by the Engineer and approved by the Owner, shall constitute final acceptance of the work.

Final acceptance shall not constitute acceptance of any unauthorized or defective work or material, nor shall progress estimates be construed as acceptance of any work under this contract. The Owner shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or from recovering damages for any such work or material.

*NSC* { Projects will generally be accepted at such time as they are entirely completed. However, on projects consisting of several disconnected streets, sewer lines, or water lines, the Engineer may accept any of these separate sections that the Engineer so elects. On continuous street projects of less than 12 city blocks, the Contractor shall be required to complete the entire project before acceptance. Street projects longer than 12 blocks may be accepted in sections

of 6 blocks or more, as the Engineer may determine. In all cases, acceptance will not be considered unless the entire work in the partial segment or section being considered for final acceptance, is complete.

1-05.12(1) MAINTENANCE PERIODS (New Section) (6-21-85)

NIC On non-federally funded projects, the work occasionally involves items such as machinery or other mechanical equipment (either furnished or installed by the Contractor, or furnished by the Owner and installed by the Contractor), buildings, or work which may otherwise be of such a nature that it is desirable by the Owner to have the Contractor maintain, test, or maintain and test the work for a period of time after final inspection by the Engineer.

It is the intent of the Owner to have at final acceptance a complete and operable system. Therefore, such items of the work as may be listed in the contract documents shall be fully tested under operating conditions to ensure their acceptability prior to final acceptance. The Contractor shall, upon completion of the work and following final inspection, operate the complete system under the observation of the Engineer for a test period of no less than 14 consecutive calendar days. During and following this test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first-class operating condition. All equipment, electrical controls, meters, and other devices to be tested during this period will be tested under the supervision of the Engineer so as to determine their suitability for the purpose for which they were installed. All costs for power, gas, labor, material, supplies, and incidentals shall be borne by the Contractor unless specifically set forth otherwise in the contract documents.

When such periods are required by the Owner, such periods shall not affect any manufacturer's guarantees or warranties furnished to the Owner under the terms of the contract.

1-05.13 SUPERINTENDENTS, LABOR, AND EQUIPMENT OF CONTRACTOR (4-20-87)

The third paragraph is revised to read:

Competent supervisors experienced in the task being performed shall continuously supervise all contract work. A superintendent that repeatedly fails to follow any written or oral order, direction, instruction, or determination from the Engineer shall be immediately removed from the project by the Contractor upon written request of the Engineer, and the Contractor shall designate in writing a new superintendent. All incompetent, careless, or negligent employees shall be immediately replaced by the Contractor upon written request of the Engineer. Failure of the Contractor to comply with such a request from the Engineer shall be sufficient grounds for termination of the contract under the terms of Section 1-08.10 of these specifications.

Add the following after the fourth paragraph:

NIC } The Contractor's performance and compliance with the terms of the contract will be rated by the Engineer. The rating will be in the following categories:

- NIC
1. Progress of Work;
  2. Quality of Work;
  3. Equipment;
  4. Administration/Management/Supervision; and
  5. Coordination and Control of Subcontractors.

Any unacceptable reports will be taken into consideration when determining a Contractor's qualification for future contracts.

1-05.16 WATER AND POWER (New Section) (6-21-85)

The Contractor shall make all necessary arrangements for power and water. All costs thereof shall be borne by the Contractor.

NIC 1-05.17 VERBAL AGREEMENTS (New Section) (6-21-85)

No verbal agreement or conversation with any officer, agent, or employee of the Owner, either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the contract. Any such verbal contract shall be considered as unofficial information and in no way binding upon the Owner.

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**SECTION 1-06 CONTROL OF MATERIALS  
(August 11, 1987)**

**1-06.2 SAMPLES AND TESTS (9-24-85)**

Delete second paragraph and replace with the following:

All testing of materials will be according to special methods of test as set forth in the contract documents, or according to applicable recognized standards of national organizations. This will apply to field tests as well as to laboratory tests.

Supplement paragraph 3 with the following subparagraph:

A.W.W.A. -- American Waterworks Association. The effective date of the AWWA Specifications is on the first day of the second month after publication in the American Waterworks Journal. The AWWA Specifications and Revisions thus in effect at the time of the call for bids shall apply whenever referenced in these specifications. Copies of AWWA Specifications may be obtained from American Waterworks Association, Inc., 6666 W. Quincy Avenue, Denver, Colorado 80235.

**1-06.3 EQUIVALENT MATERIALS (New Section) (9-24-85)**

Mention of manufacturers by brand name and model number is occasionally made in order to establish a basis of quality for certain items of material, equipment, or processes. Such mention is intended to include products of other manufacturers that will measure up to the designated standards of the product mentioned.

If the Contractor desires to use products other than those specified under this "or equal" provision, he shall obtain the approval of the Engineer before entering an order therefor.

Wherever mention is made of a specific manufacturer, such mention shall be treated as if the phrase "c. equal" appears thereafter whether or not in fact it does. The terms "or equal" and "or approved equal" shall be considered synonymous.

**1-06.5 AMERICAN-MADE MATERIALS REQUIRED (9-24-85)**

Delete paragraph 3 and replace with the following:

When non-American made construction materials are utilized, the Contractor in compliance with Chapter 39.25 RCW shall, upon completion of the work, furnish a certified statement setting forth the nature and source of non-American made materials in excess of \$2,500.00 which have been used by the Contractor in performance of the work. The statement shall be delivered to the Engineer.

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SECTION 1-07 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC  
(August 11, 1987)

*NIC* 1-07.1 LAWS TO BE OBSERVED (4-20-87)

The last sentence of the third paragraph is deleted.

1-07.2 STATE TAXES

*NIC* Delete Sections 1-07.2, 1-07.2(1), 1-07.2(2) and 1-07.2(3) in their entirety, and replace with the following:

1-07.2 STATE TAXES (9-24-85)

The Washington State Department of Revenue has issued special rules designed to assist the Contractor in accurately reporting to the Department of Revenue the Contractor's true tax liability. Sections 1-07.2(1) through 1-07.2(3) of these specifications are meant to clarify those rules as they relate to the retail sales tax.

Although the Owner may furnish information in the Project Manual regarding the application of State taxes to a particular contract or bid item, it shall be the Contractor's responsibility as to the correct interpretation of the laws and regulations relating to such taxes. Adjustments will not be made in the amount to be paid by the Owner under the contract because of any misunderstanding by the Contractor as to the Contractor's liability for, or the amount of, any taxes. If the Contractor is in doubt as to the tax procedures in any particular case, the Contractor shall consult with the Washington State Department of Revenue.

*NIC* 1-07.2(1) STATE SALES TAX-RULE 171 (9-24-85)

WAC 458-20-171 and its related rules apply to building, repairing or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the State, or by the United States, and which are used primarily for foot or vehicular traffic. For work performed in such case, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid prices or other contract amounts including those the Contractor pays on purchases of materials, equipment and supplies used or consumed in doing the work.

*NIC* 1-07.2(2) STATE SALES TAX-RULE 170 (10-21-85)

WAC 458-20-170 and its related rules apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. For work performed in such cases, the Contractor shall collect from the Owner, retail sales tax on the full contract price. The Owner will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor

shall not include the retail sales tax in the unit bid prices or any other contract amount subject to Rule 170 with the following exception.

Exception: The Owner will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid prices or in any other contract amount.

*NIC* 1-07.2(3) SERVICES (9-24-85)

The Contractor shall not collect retail sales tax from the Owner on any contract wholly for professional or other services (as defined in State Department of Revenue Rules 138 and 224).

1-07.5 GAME, FISHERIES, AND ECOLOGY REGULATIONS

Delete this title and section, and replace with the following:

1-07.5 PREVENTION OF ENVIRONMENTAL POLLUTION AND PRESERVATION OF PUBLIC NATURAL RESOURCES (New Section) (6-21-85)

During the life of the contract the Contractor shall comply with all provisions of Federal, State and local statutes, ordinances and regulations pertaining to the prevention of environmental pollution and the preservation of public natural resources. Pursuant to RCW 39.04.120 (Ch. 62, Sec 1, Laws of 1973, 1st Ex. Session) such provisions as are reasonably obtainable are set forth below. Further, if the Contractor must undertake additional work not contemplated by the contract, due to the enactment of new or the amendment of existing statutes, ordinances, rules, or regulations occurring after the submission of the successful bid, the Owner will issue a change order setting forth the additional work that must be undertaken, which shall not invalidate the contract. Such additional work shall be considered extra work and will be compensated in accordance with the provisions of Section 1-09.

1-07.5(1) WATER QUALITY (New Section) (4-20-87)

The Contractor shall comply with such city, state, and federal statutes, ordinances, regulations, or rules as are applicable to water pollution occurring in state and interstate navigable waters. Violations of the city, state, or federal laws, rules, regulations, ordinances, etc., are subject to penalty from all entities.

The Contractor shall exercise all necessary precautions throughout the life of the contract to prevent pollution, erosion, siltation, and damage to property; shall provide for the flow of all water courses, including but not limited to streams, ditches, sewers, and drains, etc., intercepted during the progress of the work; and shall completely restore the same in as good condition as the Contractor found them, or shall make such final provisions for them as the Engineer may direct. The Contractor shall not obstruct the gutter of any

street, and shall use all proper measures to provide for the free passage of surface water. The Contractor shall make provisions to take care of all surplus water, mud, silt, slickings, or other run-offs pumped from excavations or resulting from sluicing or other operations. Water quality criteria for the State of Washington can be obtained by contacting the Washington State Department of Ecology. In addition to the water quality criteria set forth by the Department of Ecology, the Contractor shall comply with the regulations set forth by the Washington State Department of Game and Fisheries, those federal statutes on oil spills enacted under the Federal Water Pollution Control Act Amendments of 1972 (a copy of which may be obtained from the U.S. Environmental Protection Agency), the water quality standards of the State of Washington as set forth in Chapter 173-201 of the Washington Administrative Code, and any local statutes, regulations, ordinances, or rules, which stipulate the various types of discharge prohibited in public sewer systems or any drainage ditch in the local jurisdiction.

State statutes on water pollution covering liability of the Contractor, penalty for violation, liability and damages for injury or death of fish, animals or vegetation are set forth in RCW 90.48. As an aid to the Contractor, some, though not all, of the rules set forth by the various state departments are summarized below. The Contractor is cautioned, however, that each department may add other restrictions as may be needed to protect fish and to prevent air or water pollution, all without any prejudice to the Owner:

(A) State Departments of Game and Fisheries:

In doing the work the Contractor shall:

1. Not degrade water quality in a way that would harm fish. (The Washington State Water Quality Regulations will serve as water quality criteria for the project.)
2. Release into a flowing stream or open water any fish stranded by the project.
3. Replant any stream bank or shoreline areas if the project has disturbed the vegetative cover. (Any trees, brush, and grasses used in replanting shall resemble the type and concentration of surrounding vegetation, unless the Special Provisions permit otherwise.)
4. Provide an open water channel at the lowest level of any isolated pothole remaining when the work is complete.
5. Protect fish by preventing harmful siltation on the bed or bottom of any body of water.
6. Never block stream flow or fish passage.
7. Keep all equipment out of any flowing stream or other body of water (except as the Special Provisions may permit).

8. Never remove gravel or other bottom material from within the high-water flow channel bed of any stream nor from the bottom of any other body of water (except as the Special Provisions may permit).
9. Dispose of any project debris by removing it, burning it, or placing it beyond high-water flows.

(B) State Department of Ecology:

In doing the work, the Contractor shall:

1. Obtain a waste discharge permit from the Ecology Department before:
  - a. Washing aggregate, and
  - b. Discharging into a ground or surface waterway, water from pit sites or excavations, when the water contains turbidity, silt, or foreign materials.
2. Provide the Engineer with a copy of each waste discharge permit before starting the work.
3. Control drainage and erosion to minimize the pollution of any waterway.
4. Dispose of all toxicants (including creosote, oil, cement, concrete, and water used to wash equipment) in ways that will prevent them from entering State waters.
5. Dispose of all debris, overburden, and other waste materials in ways that will prevent them from entering State waters.
6. Immediately notify the Department of Ecology should any accidental spill of oil, chemicals, or sewage occur into the waters of this State.

The Contractor shall perform such temporary work as may be necessary to effectively control water pollution, erosion, and related damage within the project limits. The Contractor shall also be responsible for any temporary water pollution control measures which might be necessary at work areas not located within the construction area. These areas may include, but are not limited to, equipment, material and other storage sites. When temporary control facilities are no longer needed, they shall be removed and the areas finished as designated by the Engineer.

If work is suspended for an extended period of time, the Contractor shall take all action necessary to control erosion, pollution, and runoff during the shut-down period.

In addition to the requirements of Section 1-07.15 this temporary work shall include, but is not limited to, the following water quality considerations:

1. Diversions of Uncontaminated Water: Storm water shall be diverted around the project to prevent pickup of silt. This may be accomplished by pumping; improvising ditches; lining channels or by placing metal, plastic or concrete gravity pipe; constructing ditches, berms, culverts, etc., to control surface water; or constructing dams, settling basins, or energy dissipators to control down stream flows.
2. Intercepting Ground Water: Surfacing ground water shall be intercepted and routed around the construction site to prevent silt erosion by the use of gravel trenches, French drain tiles, well points, or interceptor ditch. The Contractor shall provide means of controlling underground water which may be encountered during construction.
3. Turbid Water Treatment Before Discharge: Determination of turbidity in surface waters shall be at the discretion of the Engineer; for Lake Class Receiving Waters, turbidity shall not exceed 5 NTU (Nephelometric Turbidity Units) over background conditions; for Class AA and Class A Waters, turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU; for other classes of waters, refer to WAC 173-201-045.

The term turbidity means the optical property of sample demonstrating the scattering and absorption of light caused by suspended material as expressed in Nephelometric Turbidity Units and measured with a calibrated turbidimeter.

Discharges to a State waterway caused by aggregate washing, drainage from aggregate pit sites, and stockpiles or dewatering of pits and excavations shall not increase the existing turbidity of the receiving waters.

Turbid water from the construction site shall be treated to the satisfaction of the Engineer before being discharged into stream or other State waters. Turbidity may be removed by the use of lagoons or holding ponds, settling basins, overflow weir, polymer water treatment, discharging to ground surface, by percolation, evaporation or by passing through gravel, sand or fiber filters.

4. Erosion Control: Temporary erosion control until permanent measures are effective shall be exercised by minimizing exposed areas and slopes. Plastic sheet covering shall be placed over exposed ground areas to protect from rain erosion. Other alternative methods for erosion control under certain situations include netting, mulching with binder, and seeding.

Should rutting and erosion occur the Contractor shall be responsible for restoring damaged areas and for clean-up of eroded material including that in ditches and culverts.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

5. Chlorine Residual: Water containing chlorine residual from water main testing and cleaning shall not be discharged directly into storm drains, streams or State waters. Chlorine water may be discharged into sanitary sewers or disposed on land for percolation. Chlorine residual may be reduced chemically with a reducing agent such as sodium thiosulphate. Water shall be continually tested for chlorine residual.
6. Vehicle and Equipment Washing: Water used for washing vehicles and equipment shall not be allowed to enter storm drains, streams or other State waters unless separation of petroleum products, fresh concrete products or other deleterious material is accomplished prior to discharge. Detergent solution may be discharged into sanitary sewers or allowed to be held on the ground for percolation. A recirculation system for detergent washing is recommended. Steam cleaning units shall provide a device for oil separation.
7. Oil and Chemical Storage and Handling: Handling and storage of oil and chemicals shall not take place adjacent to waterways. The storage shall be made in dike tanks and barrels with drip pans provided under the dispensing area. Shut-off and lock valves shall be provided on tanks. Shut-off nozzles shall be provided on hoses. Oil and chemicals shall be dispensed only during daylight hours unless the dispensing area is properly lighted. Disposal of waste shall not be allowed on oil and chemical spills. Fencing shall be provided around oil storage. Locks shall be provided on valves, pumps, and tanks.
8. Sewage: If a sanitary sewer line is encountered and repair or relocation work is required, the Contractor shall provide blocking and sealing of the sanitary sewer line. Sanitary sewer flow shall be pumped out, collected, and hauled by tank truck or pumped directly to a sanitary system manhole for discharge. The existing sewers shall be maintained by the Contractor without interruption of service by the use of temporary sewer bypasses. In addition, the excavated materials adjacent to the ruptured sanitary sewer line shall be removed from the project and deposited into refuse trucks for haul to a sanitary fill site. Equipment and tools in contact with the above materials shall be washed by pressure water lines and the attendant wash water discharged into a sanitary sewer line for transmission to a sewage treatment plant.

The Contractor shall also be responsible for temporary water pollution control measures at work areas (e.g. equipment, storage sites, etc.) not located within the construction area.

In the event of a sanitary sewage spill, notification shall also be made to the following: Seattle-King County Health Department, 625-2763; METRO, 447-6666.

Water quality criteria for the State of Washington can be obtained by contacting the State Department of Ecology.

The Contractor shall report all incidents of chemical, oil, or other contaminated discharges into state waters which become known to the Contractor and immediately notify the Engineer and the United States Coast Guard, and if for any reason this agency cannot be reached the Contractor shall call the Department of Ecology at 885-1900 or the toll free number 800-424-8802. The toll free number is the National Response Center operated by the Coast Guard in Washington D.C. This center is in operation 24 hours a day.

**1-07.5(2) AIR QUALITY (New Section) (6-21-85)**

The Contractor shall not cause or allow the discharge of particulate matter, the emission of any air contaminants or odor bearing gases in excess of the limits specified under Regulation I of the Puget Sound Air Pollution Control Agency, Article 9 - Emission Standards.

The Contractor shall maintain air quality within the National Emission Standards for Hazardous Air Pollutants. Air pollutants being defined as that to which no ambient air quality standard is applicable and which in the judgement of the Administrator of the Environmental Protection Agency Clean Air Act may cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness.

**1-07.5(3) NOISE POLLUTION (New Section) (11-28-85)**

The Contractor shall take all reasonable measures for the suppression of noise resulting from work operations. Mobile engine driven cranes, loaders and similar material handling equipment; engines used in stationary service for standby power; and air compressors for high and low pressure service shall be equipped with exhaust and air intake silencers designed for the maximum degree of silencing. The type of silencer required is that for use in critical noise problem locations such as high density residential, hotel, and hospital areas.

The Contractor shall meet the applicable noise control requirement listed in Seattle Municipal Code Chapter 25.08 when performing work inside the City limits, and King County Ordinance No. 3139 when performing work outside the City limits. Failure to comply with the requirements of this Section will result in the work being suspended in accordance with Section 1-08.6 until the non-complying sound source is removed or corrected.

**1-07.5(4) LIABILITY (New Section) (6-21-85)**

The Contractor shall be liable for the payment of all fines and penalties resulting from failure to comply with the Federal, State and local pollution control regulations set forth herein even though the Engineer is on the job at the time of the violation.

Except as may be otherwise provided for in the Special Provisions, all costs pertaining to the prevention of environmental pollution and the preservation of public natural resources as outlined in Section 1-07.5(1), 1-07.5(2), and 1-07.5(3) will be considered as incidental to the construction of this project

and such costs shall be included in the bid prices in the various items which comprise this contract.

If there is a delay on a project caused by litigation which exceeds 6 months, the Contractor may then elect to terminate the contract and to delete the completion of the contract and receive payment in proportion to the amount of the work completed plus the cost of delay.

1-07.5(5) ARCHAEOLOGICAL AND HISTORIC PRESERVATION (New Section) (6-21-85)

"On the private and public lands of this State, it shall be unlawful for any person, firm, corporation or any individual to knowingly alter, dig into or excavate by use of any mechanical, hydraulic, or other means, or to damage, deface or destroy any historic or prehistoric archaeological resource or site . . . without having obtained written permission from the preservation officer for such activities on public property . . . ." (RCW 27.53.060)

It shall be the responsibility of the Contractor to notify the Engineer if any artifacts, skeletal remains or other archaeological resources (as defined under RCW 27.53.040) are unearthed during excavation or otherwise discovered on the construction site. If directed by the Engineer, the Contractor shall immediately suspend any construction activity which, in the opinion of the Engineer, would be in violation of RCW 27.53. The suspension of work shall remain in effect until permission to proceed has been obtained from the State Historic Preservation Officer. The Engineer will obtain the required permission.

1-07.6 PERMITS AND LICENSES (6-21-85)

Delete this section and replace with the following:

*City to furnish Permits*

*W/C*  
The Contractor shall procure and pay for all necessary permits and licenses not included in the Special Provisions or the Appendix thereto required for the construction of the work, and for temporary obstructions, enclosures, openings of streets for pipes, walls, etc., arising from the construction and completion of the work described in the Contract Documents. The Contractor shall be responsible for all violations of the law for any cause in connection with the construction of the work, or caused by obstruction of the work, or caused by obstructing streets, sidewalks, etc. The Contractor shall give all requisite notice to public authorities. A copy of each permit or license obtained by the Contractor shall be furnished to the Engineer.

Wherever a project is being constructed beneath, at grade or above railroad tracks, the permits for the construction will have previously been secured by the Owner. It shall be the Contractor's responsibility to conform to the terms and provisions of the permits as may be described in the Special Provisions. The Contractor shall hold the Owner harmless from any and all damages resulting from the Contractor's construction operations at such railroad crossings.

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1-07.8 LABOR (New Section) (6-21-85)

The Contractor shall at all times employ workmen who are skilled in their respective lines. The Contractor is restricted in his selection of labor and payment therefor by certain legal requirements which must be observed for compliance with the public policy enunciated in RCW 49.28. This refers to the eight hour day, payment for overtime, cancellation of contract for violations, and penalties for violations of provisions therein. The Contractor shall be thoroughly familiar with all provisions of this and other statutes that are subsequently noted herein before commencing work on his contract.

NIC 1-07.9 WAGES (6-1-87)

Delete this section and replace with the following:

NIC 1-07.9(1) GENERAL (New Section) (6-1-87)

The Work is subject to the minimum wage requirements of RCW 39.12 and to RCW 49.28 (as amended or supplemented). On projects funded in whole or part from Federal monies, Federal wage laws and rules shall also apply.

The Contractor, any subcontractor or other person doing any portion of the Work, shall not pay a worker less than the prevailing rate of wage for said worker's classification. Higher wages and benefits may be paid at the Contractor's option. When the Work is subject to both State and Federal prevailing wage rates, and when the two rates differ for similar kinds of labor, the Contractor shall pay the higher rate.

In accordance with WAC 296-127-011, the effective date for determination of prevailing wages by the Department of Labor and Industries will be the date of Bid Opening, provided the contract is awarded within 60 days after bids are due. For projects funded in whole or part with Federal monies, the effective date shall be the day of Bid Opening, provided the contract is awarded within 90 days after bids are due. If the contract is not awarded within 60 days (90 days for Federal projects) after bids are due, the effective date for determining prevailing wages shall be the date the contract is awarded. If the contract is not awarded pursuant to bids, the effective date for determination of prevailing wages shall be the date on which the contract is awarded.

It shall be the sole responsibility of the Contractor to assign the appropriate classification to all laborers, workmen or mechanics who perform any work pursuant to this contract and to ascertain the applicable prevailing rate of wage for each such classification. Current prevailing wage data may be obtained upon request from the Industrial Statistician of the Department of Labor and Industries, ESAC Division, General Administration Building, Olympia, WA 98504, telephone (206) 753-4019. For projects funded in whole or part with Federal monies, current wage information may be obtained from the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division, Federal Office Building, Seattle, WA 98104, telephone (206) 442-1914.

The Project Manual includes hourly minimum rates for wages and fringe benefits to be paid workmen employed in the Work. When the Project Manual includes Federal wage and fringe benefit rates, the rates may also be identified by the U.S. Department of Labor's "Decision Number." Wage Rates included in the Project Manual will be the most current available at the time of advertisement. Any modification to the Wage Rates which come to the Owner's attention during the advertisement period will be made a part of the Contract Documents by Addendum. If there is insufficient time to mail out this Addendum, it will be made available only at the time and place of bid submittal. By including Wage and Fringe Benefit rates in the Project Manual, the Owner does not imply that the Contractor will find labor available at those rates. The Contractor shall calculate any amounts above the minimums which have to be paid. Furthermore, any listing of wages and fringe benefits set forth in the Contract Documents for any classification is intended only as a guideline for the Contractor and does not necessarily reflect the most recent classification or prevailing wage rate.

If the Contractor employs labor in a class not listed in the Project Manual, the Contractor shall, on projects where only State prevailing wage rates apply, request the Industrial Statistician to determine the correct wage rate for that class and locality. If the project is funded in whole or part with Federal monies, the Contractor shall request the Industrial Statistician of the Washington State Department of Labor and Industries to determine a State wage rate for that class and locality and shall ask the U.S. Department of Labor and Industries to also determine a Federal wage rate for that class and locality. Should those wage rates differ, the Contractor shall use the highest wage rate determined.

1-07.9(2) POSTING NOTICES (New Section) (6-1-87)

In a location acceptable to the Department of Labor and Industries, the Contractor shall post:

- (1) One copy of the approved "Statement of Intent to Pay Prevailing Wages," and
- (2) The address and telephone number of the Industrial Statistician for the Department of Labor and Industries (along with notice that complaints or questions about wage rates may be directed there).

1-07.9(3) APPRENTICES (New Section) (6-1-87)

If employing apprentices, the Contractor shall submit to the Engineer written evidence showing:

- (1) Each apprentice worker's apprentice agreement is registered and approved by the State Apprenticeship Council,
- (2) Each apprentice is enrolled in a program approved by the State Apprenticeship Council,
- (3) The progression schedule for each apprentice, and

(4) The established apprentice-journeyman ratios and wage rates in the project locality upon which the Contractor will base such ratios and rates under the contract.

An apprentice whose apprentice agreement is registered and approved by the State Apprenticeship Council within 60 days of hiring shall be considered an apprentice of that trade for all hours worked.

If the Contractor makes use of apprentices on Work governed by wage rates determined by the U.S. Secretary of Labor, the Contractor shall present to the Engineer written evidence of registration of such employees in a program of a State Apprenticeship and Training Agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. Such evidence shall be submitted together with the first payroll upon which the name of the employee appears. In the absence of such a state agency program the Contractor shall submit evidence of approval and registration by the U.S. Bureau of Apprenticeship and Training.

1-07.9(4) DISPUTES (New Section) (6-1-87)

If labor and management cannot agree in a dispute over the proper prevailing wage rate, the Contractor shall refer the matter to the Director of the Department of Labor and Industries when such dispute involves State prevailing wage rates. In such case, the Director's decision shall be final, conclusive and binding on all parties.

If the dispute involves a Federal prevailing wage rate, the Contractor shall refer the matter to the U.S. Secretary of Labor for a decision. The Secretary's decision shall be final, conclusive and binding on all parties.

1-07.9(5) REQUIRED DOCUMENTS (New Section) (6-1-87)

Before payment is made by the Owner of any sums due under this contract, the Owner must receive from the Contractor and each subcontractor a copy of a "Statement of Intent to Pay Prevailing Wages" (form L&I No. 700-29), approved by the Washington State Department of Labor and Industries.

Upon completion of the Work, the Owner must receive from the Contractor and each subcontractor a copy of a "Affidavit of Wages Paid" (Form L&I No. 700-7), approved by the State Department of Labor and Industries. In addition, a "Request for Release" form (Form L&I No. 206-83) shall be submitted to the Department of Labor and Industries before that Department will release the Owner from all liability pursuant to Title 50 or Title 51, RCW. This written release from Labor and Industries to the Owner and the above "Affidavit of Wages Paid" will be required before any funds, retained according to RCW 60-28-010, are released to the Contractor.

A fee of \$12.50 per each "Statement of Intent to Pay Prevailing Wages" and "Affidavit of Wages Paid" is required to accompany each form submitted to the Department of Labor and Industries. The Contractor is responsible for payment of these fees and shall make all applications directly to the Department of

Labor and Industries. The cost of these fees shall be included in the prices of the various units of work which comprise this contract.

The required forms specified herein may be obtained from the Department of Labor and Industries.

1-07.9(6) AUDITS (New Section) (6-1-87)

The Contractor's records pertaining to wages paid and payrolls shall be open to inspection or audit by representatives of the Owner and, if applicable, representatives of grant agencies funding or controlling funding for the project at any time during the life of the contract and for a period of not less than 3 years after the Date of Acceptance. The Contractor shall retain such records for that period. Where such records pertaining to wages paid on any payrolls are maintained by subcontractors or agents of the Contractor, the Contractor guarantees that the records of such subcontractors or agent shall be open to inspection and audit on the same terms and conditions as the records of the Contractor.

If an audit is to be commenced more than 60 days after the acceptance date of the contract, the Contractor will be given a reasonable notice of time when such audit is to begin.

1-07.11(1) GENERAL (6-21-85)

Supplement this section with the following:

The City of Seattle Department of Human Rights will monitor the Contractor's and each subcontractor's affirmative action program, utilizing the EEO documentation submitted by the Contractor for the Contractor and each subcontractor, to determine the affirmative action efforts made by the Contractor and each subcontractor. The Contractor shall be responsible for each subcontractor's compliance. If the Human Rights Department (HRD) is not satisfied that the documentation submitted by the Contractor complies with the requirements herein, an attempt will be made by HRD to reach a satisfactory solution of the problem with the Contractor. Should discussions between the HRD and the Contractor result in an unsatisfactory conclusion, as determined by the HRD, the HRD will find that the Contractor has not made a good faith effort, and is in noncompliance with the Contractor's own sworn commitment to ensure equality of opportunity in employment during the term of the contract.

Coincident with or before a report from the HRD asserting unsatisfactory performance is sent to the awarding authority, the HRD will notify the Contractor in writing of such report and of the Contractor's right to be heard by the awarding authority. The awarding authority will give the Contractor an opportunity to be heard after 10 days notice.

If the unsatisfactory performance is by a subcontractor, the Contractor will be given an opportunity to remedy the subcontractor's noncompliance before the report is sent to the awarding authority. If after said hearing, the awarding

authority concur with the report submitted by the HRD that the Contractor has failed to comply with or ensure the promises and representations made in the sworn statement and other required documentation or has failed to live up to or ensure compliance with the employment goals established in the contract pursuant to Section 20.44.100 of the Seattle Municipal Code, the awarding authority will find the Contractor in noncompliance. Thereafter, the Owner will not enter into any contract with the noncomplying Contractor until the awarding authority is reasonably assured of future satisfactory compliance. This action will be in addition to such other remedies which may be available to the Owner under the provisions of the contract.

1-07.11(2) EQUAL EMPLOYMENT OPPORTUNITY POLICY (10-21-85)

Add the following to the policy statement:

The Contractor will not discriminate against any employee or applicant for employment because of race, religion, creed, color, sex, marital status, sexual orientation, political ideology, ancestry, national origin, or the presence of any sensory, mental or physical handicap, unless based upon a bona fide occupational qualification. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their creed, religion, race, color, sex, national origin, or the presence of any sensory, mental or physical handicap. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment, or recruitment advertising, layoff or termination rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

The Contractor will, prior to commencement and during the term of this contract, furnish to the Director of Human Rights (as used herein Director means the Director of the Human Rights Department or his/her designee) upon his/her request and on such form as may be provided by the Director therefor, a report of the affirmative action taken by the Contractor in implementing the terms of these provisions, and will permit access to his/her records of employment, employment advertisements, application forms, other pertinent data and records requested by the Director for the purposes of investigation to determine compliance with this provision.

If upon investigation the Director finds probable cause to believe that the Contractor has failed to comply with any of the terms of these provisions, the Contractor and the contracting authority shall be so notified in writing. The contracting authority shall give the Contractor an opportunity to be heard, after 10 days notice. If the contracting authority concurs in the findings of the Director, it may suspend the contract and/or withhold any funds due or to become due to the Contractor, pending compliance by the Contractor with the terms of these provisions.

Failure to comply with any of the terms of these provisions shall be a material breach of this contract.

The foregoing provisions and policy shall be inserted in all subcontracts for work covered by this contract.

**1-07.11(4) DISSEMINATION OF POLICY (6-21-85)**

*NIC* Add the following as subparagraph 4 to paragraph 1:

The Contractor shall ensure that all employees, particularly supervisors, are aware of, and adhere to their obligations to maintain a working environment free from discriminatory conduct, including, but not limited to, harassment and intimidation of minorities and women.

**1-07.11(5) RECRUITMENT (6-21-85)**

*NIC* Supplement this section with the following:

The term "minority" used in the Standard Specification shall be understood to mean "woman and minority". When possible, the Contractor shall provide after-school, summer, and vacation employment opportunities for women and minority youth.

**1-07.11(6) PERSONNEL ACTIONS (6-21-85)**

Supplement subparagraph 2 of paragraph 1 with the following:

*NIC* The Contractor shall also evaluate the work force profile on a quarterly basis to identify the job categories in which minorities and women are underutilized in comparison to the minority and women employment ratios indicated in percentages set forth in the Instructions to Bidders.

Supplement this section further with the following:

*NIC* The Contractor shall review all existing application forms, test minimum qualifications, etc., for job relatedness and necessity, and revise any forms, practices, and activities which would adversely impact minority and women applicants.

The Contractor shall maintain a current file of the names and addresses and telephone numbers of all job applicants as set forth in Section 1-07.11(10).

**1-07.11(7) TRAINING AND PROMOTION (03-17-86)**

*NIC* Delete this section and replace with the following:

The Contractor shall assist in locating, qualifying and increasing the skills of minority group and women employees and applicants for employment. The Contractor may call 1-(800)-562-8166, toll free, for assistance in filling a trainee position with a minority or woman in accordance with this section.

Consistent with the Contractor's work force requirements and as permissible under Federal, State and City regulations, the Contractor shall make full use of training programs, i.e., apprenticeship and on-the-job training programs, for the geographical area of contract performance to meet the training requirements. The use of existing approved State or Federal apprenticeship programs and standards is preferred.

*NIC* 1-07.11(8) UNIONS (6-21-85)

Delete subparagraph 3 of paragraph 1 of this section and replace with the following:

The Contractor shall obtain information as to the referral practices and policies of the labor union, except to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor. The Contractor shall certify to the Engineer and shall set forth what efforts have been made to obtain such information.

*NIC* 1-07.11(10) RECORDS AND REPORTS (6-21-85)

Supplement this section with the following:

The Contractor shall submit the EEO reports listed in the Project Manual, which will be used by the Human Rights Department to document the Contractor's compliance with the EEO provisions of Section 1-07.11. These reports shall be submitted on a bi-weekly basis to the Human Rights Department by the Contractor and each subcontractor whenever that subcontractor is working on the project. The Contractor's first submittals are due 2 weeks after the contract start date specified in the Notice to Proceed, and at 2-week intervals thereafter, until completion of the work.

A Contractor having more than one contract or project with the City shall not combine the reporting information of the separate contract or project. Each contract or project shall be reported separately. The shifting of minorities and women to the work force of various separate projects in an attempt to show compliance within an affirmative action plan will not be acceptable.

In meeting the requirements of Section 1-07.11, the Contractor shall specifically:

1. Maintain a current file of the names, addresses, and telephone numbers of all job applicants specifying the race and gender of each job applicant, and the action taken with respect to such job applicant.
2. Maintain and keep a written record of the time and place of notices regarding affirmative action, persons notified, and the specific subject of the notice.
3. Maintain records in an easily retrievable and understandable format that will document any and all openings and opportunities for advancement that

occur. The Contractor's efforts to train, recruit, and promote minorities and women, and the results of those affirmative action efforts.

The Contractor shall submit such additional forms and documentation as may be included in the Contract Documents on the forms and at the times set forth therein.

*NIL* 1-07.13 CONTRACTOR'S RESPONSIBILITY FOR WORK (9-24-85)

Delete sentence 1 of exception No. 5, paragraph 2, and replace with the following:

Any temporary work such as detours, detour structures, or temporary illumination which is damaged as a result of vandalism, third party damage or under the conditions specified in Item 1 above, subject to the following limitations:

*JIC* 1-07.14 RESPONSIBILITY FOR DAMAGE (9-18-86)

Delete this section and replace with the following:

*NIL* 1-07.14(1) GENERAL (New Section) (9-18-86)

The Contractor shall be responsible:

- (1) for a loss or damage that may happen to the Work or any part;
- (2) for a loss of material or damage to materials or other things used or employed in performance of the Work;
- (3) for any liability imposed by law for injuries to, or the death of, any persons or damages to property resulting from any cause whatsoever during performance of the Work, or before Final Acceptance;
- (4) for damage to the public for any cause which might have been prevented by the Contractor, the Contractor's workmen, or anyone employed by the Contractor;
- (5) except as may be provided otherwise in Section 1-07.13 to prevent damage, and for any such damage, to completed portions of the Work and to property located off the Project Site caused by erosion, siltation, run-off, or other related items during the construction of the project;
- (6) for any pollution of rivers, streams, ground water, or other waters which may occur as a result of construction operations.

1-07.14(2) INDEMNIFICATION (New Section) (9-18-86)

*N/C*  
The Contractor shall defend, indemnify and save harmless the Owner, all officers and employees of the Owner, and the Owner's agents from any and every claim and risk and all losses, damages, demands, suits, judgements and attorney fees, or other expenses of any kind, on account of injury to or death of any and all persons (including but not limited to the Contractor, the Contractor's agents, employees, subcontractors, and their successors and assigns as well as the Owner, all officers and employees of the Owner, the Owner's agents, and all third parties), or on account of all property damage of any kind, whether tangible or intangible, or loss of use resulting therefrom, to any party arising out of or in any manner connected with the work performed under this contract, or caused or occasioned in whole or in part by reason of the presence of the Contractor, the Contractor's subcontractors, or their property, employees or agents, upon or in proximity to the property of the Owner during performance of the Work or at any time before Final Acceptance, except only for those losses resulting from and to the extent of the negligence of the Owner or the Owner's agent with regard to activities that are not the responsibility of the Contractor or included within the Contractor's scope of work.

If the claim, suit, or action for injuries, death, or damages is caused by or results from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the indemnitor or the indemnitor's agents or employees, the indemnity provisions provided for in the preceding paragraphs of this specification shall be valid and enforceable only to the extent of the indemnitor's negligence.

The Contractor shall also indemnify, defend, and save harmless any county, city or district and the officers and employees of said county, city or district connected with the Work within the limits of which county, city or district the work is being performed hereunder all in the same manner and to the same extent as provided above for the protection of the Owner and the Owner's officers, employees and agents provided that no retention of money due the Contractor will be made by the Owner except as provided in RCW 60.28, pending disposition of suits or claims for damages brought against the county, city or district.

In addition to any remedy authorized by law the Engineer may retain so much of the money due the Contractor as deemed necessary by the Owner pursuant to Section 1-09.9(3) to assure indemnification until disposition has been made of such suits or claims.

*N/C*  
1-07.15 TEMPORARY WATER POLLUTION/EROSION CONTROL (10-21-85)

Delete this section and replace with the following:

Temporary water pollution/erosion control work shall consist of temporary measures which may be shown in the plans, specified in the special provisions, proposed by the Contractor and approved by the Engineer, or ordered by the Engineer during the life of the contract. This work is intended to provide prevention, control, and abatement of water pollution/erosion within the limits of the project, and to minimize damage to the work, adjacent property, streams, and other bodies of water.

The Contractor shall coordinate this temporary water pollution/erosion control work with the permanent drainage and erosion control work that may be specified in the contract to the extent practicable to ensure that effective and continuous water pollution/erosion control is maintained during the construction of the project.

It is expected that compliance with these requirements and those set forth in Section 1-07.5(1) will necessitate performance of certain items of work at a different time or in a different manner than has been considered normal construction practices in the past, and that such revisions in scheduling of work may interfere with said normal construction practices.

If required by the Special Provisions, the Contractor shall before starting any work on the project, submit to the Engineer for approval an effective temporary water pollution/erosion control plan. The plan shall show the scheduling for the erosion work that may be included in the contract and for the temporary erosion control measures which the Contractor proposes to take to prevent water pollution/erosion due to his operations upon areas within the limits of the project, State-provided sources, State-provided disposal sites, State-provided haul roads, and upon adjacent property, streams, and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Engineer, until the plan has been approved. The Contractor shall revise and bring the plan up to date at any time the Engineer makes written request for revisions.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised water pollution/erosion control plan, nor for any delays to the work due to the Contractor's failure to submit an acceptable plan. The Contractor shall allow not less than 5 working days for the review of any submitted or revised plan.

If the Engineer determines that water pollution/erosion is likely to be a problem, clearing and grubbing operations shall be so scheduled and performed that grading operations and permanent erosion control features can follow immediately. If the project conditions do not permit this scheduling, temporary water pollution/erosion control measures will be required between successive construction stages.

The area of excavation, borrow, and embankment operations in progress will be limited commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other permanent erosion control measures current according to the accepted schedule. If the Engineer determines that water pollution and/or erosion could occur due to seasonal limitations, the nature of the material, or the Contractor's progress, temporary water pollution/erosion control measures shall be taken immediately. The Engineer may require the Contractor's operations to be scheduled so that permanent erosion control features will be installed concurrently with or immediately following grading operations.

Under no conditions shall the amount of surface area of erodable earth material exposed at one time by clearing and grubbing, excavation, borrow or fill within the right of way exceed 18,000 square feet without prior approval by the Engineer.

Permanent erosion control work performed in accordance with the contract documents, and items included in the Bid Form, will be measured and paid for at unit contract prices. Permanent erosion control work ordered by the Engineer and not covered by contract items will be considered extra work. Only erosion control items which are included in the Bid Form or designated as such by the Engineer and ordered as extra work will be considered permanent control measures.

Temporary erosion control and water pollution control shall be the Contractor's responsibility. All costs for temporary erosion and water pollution control work shall be considered incidental to and included in the various unit prices for contract items listed in the Bid Form.

1-07.16 PROTECTION AND RESTORATION OF PROPERTY (03-17-86)

Delete this section and replace with the following:

Private/Public Property. The Contractor shall protect private or public property on or in the vicinity of the work site. He shall ensure that it is not removed, damaged, destroyed, or prevented from being used unless the contract so specifies.

Property includes, but is not limited to land, utilities, facilities, improvements lawfully occupying the right of way, trees, shrubbery, landscaping, markers and monuments, buildings and structures, conduits, pipes, sewer and water lines, fences, highway facilities (including signs and guard rails), pavement, curb, driveways, sidewalks, traffic buttons, paint-striping, and other property of all descriptions, whether shown on the Drawings or not.

If the Engineer requests in writing, or if otherwise necessary, the Contractor shall at his expense install protection, acceptable to the Engineer, for property such as that listed in the previous paragraph. The Contractor is responsible for locating all property that is subject to damage by his operation.

If the Contractor (or his agents/employees) damage, destroy, or interfere in the use of such property, he shall restore it to original condition at his expense. He shall also halt any interference with the property's use. The Engineer may have such property restored by other means and subtract the cost from money that will be or is due the Contractor if he refuses or does not respond immediately.

Trees, Shrub, and Plant Material Restoration. Trees, shrubbery, and flower beds designated by the Engineer shall be left in place and care shall be taken by the Contractor not to damage or injure such trees, shrubbery or flower beds. Where ornamental trees exist in planting areas and are not to be removed, it shall be the Contractor's responsibility to trim low limbs which will interfere with the normal operation of the Contractor's equipment. The trimming shall be performed in a professional manner by competent personnel prior to equipment operations and in a manner acceptable to the Engineer.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Any tree or other plant material, not ordered or scheduled to be removed, that is destroyed or damaged to the extent that continued life is questionable, or if disfigured due to the Contractor's operations because of carelessness, negligence or for any other reason related to the Contractor's operation shall be removed and replaced in kind by the Contractor. Restoration shall be of the same species and where possible of the same size, and shall be from approved nursery stock. In addition to the approved restoration, the Contractor shall be assessed liquidated damages for the difference in the dollar value of the damaged tree, shrub or other plant material as determined by the "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree and Landscape Appraisers, current edition, and the dollar value of the tree, shrub, or other plant material replacing the destroyed or damaged tree, shrub, or plant material. Any damages so assessed will be deducted from monies due or that may become due to the Contractor. The planting shall be in accordance with Section 8-02, and the tree, shrub, or plant material shall be planted when designated by the Engineer or during the first fall or spring planting period after the existing tree, shrub, or plant was damaged.

Fences, Mailboxes, Incidentals. The Contractor shall maintain at his expense any temporary fencing to preserve livestock, crops, or property when working through or by private property. He is liable for all damages if he does not comply with this requirement.

When it is necessary to temporarily move existing mail boxes or newspaper tubes, their usefulness shall not be impaired. The boxes shall be reinstalled at the original location or at locations ordered by the Engineer. New supports or boxes will not be required unless damaged by the Contractor. Any damage caused by the Contractor shall be at his expense for replacement or repairs. Mailbox height shall be in accordance to U.S. Post Office Department requirements as shown on the Standard Plan.

When trenching is required within a planting strip, the Contractor shall protect the existing curb, gutter and sidewalk from damage utilizing, if necessary, timber pads of sufficient thickness or other means as approved by the Engineer, to protect existing improvements. If the Engineer so requests, the Contractor shall demonstrate the method or procedure the Contractor will follow in protecting existing improvements before proceeding with trenching in a planting strip.

When, due to Contractor's operations, plastic traffic buttons or lane markers are damaged, destroyed or obliterated outside the neat line of a trench or area of pavement restoration, the Contractor shall replace them in kind.

Payment. All costs for the protection and repair specified in this section are incidental to the contract. The Contractor shall include all related costs in the unit bid prices of the contract.

1-07.17 UTILITIES AND SIMILAR FACILITIES (03-17-86)

Delete this section and replace with the following:

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
IT IS DUE TO THE QUALITY OF THE DOCUMENT.

N/C

The Contractor shall protect from damage private and public utilities encountered during the work. Utilities shall include, but are not limited to, sewer and storm drain systems; water distribution systems; electrical distribution systems; natural gas distribution systems; telephone, telegraph, and CATV systems; fire alarm systems; petroleum pipe lines; steam distribution systems; traffic control systems; powerlines and appurtenances; METRO trolley lines and feeders; railroad tracks and appurtenances; and similar facilities and systems.

Public and private utilities, or their contractors, will furnish all work necessary to adjust, relocate, repair or construct their facilities unless otherwise provided for in the Drawings or the Contract Documents.

Before any excavation begins, Contractor shall call the Utilities Underground Location Center. See Section 1-07.28 for details.

Where it is necessary to remove or relocate private utilities in order to accommodate the proposed improvement, the removal or relocation will normally be accomplished in advance of construction. Under some circumstances, however, the work of private utilities may have to be performed concurrent with the Contract work. In this case, the Contractor shall coordinate the Contract work with that of the utilities so as to cause the least possible interference with both kinds of work. Where a private utility should have been removed or relocated prior to the Contractor beginning work at the point affected, and such work by the utility was not accomplished, the Contractor shall note the presence of the facility and shall immediately notify the Engineer in writing.

The right is reserved to the Engineer and the owners of facilities, or their authorized agents, to enter upon the highway right of way for the purpose of making changes as are necessary for the rearrangement of their facilities or for making necessary connections or repairs. The Contractor shall cooperate with forces engaged in this work and shall conduct his operations in such a manner to avoid any unnecessary delay or hindrance to the work being performed by other forces. Wherever necessary, the Contractor's work shall be coordinated with the rearrangement of utility or other facilities, and the Contractor shall make arrangements with the owner of the facilities for the coordination of the work.

Should the Contractor desire to have any rearrangements made on any utility facility, including services, or other improvement, for his convenience in order to facilitate his construction operations, and rearrangement is in addition to or different from the rearrangements indicated in the Contract Document, he shall make whatever arrangements are necessary with the owners of the utility or other non-highway facility for such rearrangement and bear all expenses in connection to that work.

Attention is directed to the possible existence of underground facilities which are not shown in the plans or special provisions. When the relocation of these facilities are necessary to accommodate the highway improvement, the Engineer will provide for the relocations of these facilities by other forces, or the relocations shall be performed by the Contractor pursuant to written authorization and will be paid for by applicable unit prices, agreed price, or as force account.

Locations and dimensions shown in the Drawings for existing facilities are in accordance with available information obtained without uncovering, measuring or other verification.

It is anticipated that the Contractor may encounter private water service utilities (water service lines running between meters and private residences) during work operations. Records of these utilities are not maintained by the City and therefore do not appear on the Drawings and will not be field located by the Water Department. Normally the locations of these private utilities can be ascertained by relative meter location, residence location, or by both. Location may also be ascertained by discussion with various private property owners. It shall be the Contractor's responsibility to ascertain the location of and protect these private utilities from damage.

If it is necessary to provide temporary water supply connections due to conflict with existing private water service pipes during the course of construction, it shall be the responsibility of the Contractor to do so.

In all cases, private water service lines damaged by the Contractor shall be repaired by the Contractor at the Contractor's expense. The Contractor shall notify the Engineer immediately of any such damage and shall begin repairs immediately and work continuously until water service is restored. All repair of damaged private water service lines shall be inspected by the Seattle Water Department or applicable water utility prior to backfilling.

The Contractor is alerted to the existence of RCW 19.122, an act relating to underground utilities and prescribing penalties. Any cost or scheduling impact incurred by the Contractor by reason of Contractor's required compliance with these statutory provisions shall be borne by the Contractor.

No excavation shall begin until all known facilities in the vicinity of the excavation area have been located and marked.

All costs incurred by the Contractor in complying with requirements of this Section shall be included in the various bid prices for the items listed in this bid form.

Also see Section 1-07.28 in this Supplement for required notifications relative to Contractor's activities.

#### 1-07.17(1) CLEARANCES FROM WATER MAIN (New Section) (6-21-85)

The term "water mains" as used in this section refers to water mains and all water services. The term "sewers" as used in this section refers to sanitary sewers, combined sewers, and side sewers.

#### 1-07.17(1)A SEWERS (New Section) (2-7-86)

Sewer and watermains shall not be laid with less than the minimum horizontal and vertical clearances from each other. See Standard Plan for details.

The Contractor shall maintain the recommended spacing between watermains and sewers when conditions in the field permit. When unusual conditions necessitate less than the recommended separation, alternate construction must be approved by the Seattle Water Department.

Parallel Installation: Watermains of materials other than ductile iron shall be spaced at least 10 feet horizontally from any sanitary sewer or combined sewer. The distance shall be measured center-to-center.

Watermains of ductile iron shall be spaced at least 5 feet horizontally from any sanitary sewer or combined sewer. The distance shall be measured edge-to-edge.

Unusual conditions. When local conditions prevent a horizontal spacing of at least 5 feet a watermain may be spaced closer to a sanitary sewer or combined sewer providing that:

- a. The bottom of the watermain is at least 18 inches above the top of the sewer;
- b. Where this vertical distance cannot be obtained, the sewer shall be constructed of materials and with joints that are equivalent to watermain standards and shall be pressure tested to assure water-tightness prior to backfilling.

Crossings: Watermains crossing over side sewers, sanitary sewers or combined sewers shall be spaced to provide a separation of at least 18 inches between the bottom of the watermain and the top of the sewer wherever possible.

Unusual conditions. When local conditions prevent a vertical spacing as described the following construction shall be used:

- a. Watermains passing over sewers shall be constructed of ductile iron.
- b. Watermains passing under sewers shall, in addition to being constructed of ductile iron, be protected by providing:
  1. A vertical spacing of at least 18 inches between the bottom of the sewer and the top of the watermain.
  2. Adequate structural support for the sewers to prevent excessive deflection of joints and settling on and breaking the watermains.
  3. That a standard length of water pipe be centered at the point of crossing so that the joints will be equi-distant and as far as possible from the sewer.

Sewer manholes. No water pipe shall pass through or come into contact with any part of a sewer manhole.

Ordinance 97016 applies to the parallel installation of side sewers and watermains and to crossings of same.

Exceptions to these requirements must be approved by the Seattle Water Department Water Quality Division.

1-07.17(1)B GAS MAINS AND OTHER UTILITIES (New Section) (9-24-85)

A minimum of 1 foot vertical and 6 inch horizontal clearance shall be provided between existing gas mains or gas service lines, and new ductile iron water lines. If relocation of either utility is not practical, a protective wrap shall be provided for the entire distance where clearance is less than required. Wrapping material shall consist of either a split PVC pipe or PVC wrapping of at least 0.04 inch thickness, and shall be applied to either one of the pipes.

A clearance of 6 inches or more is desired between water mains and all other utilities except gas mains, gas service lines, and sewers and drains. If the separation is less than 6 inches, a separation of at least 2 inches shall be maintained and a sheet of 2-inch thick polyethylene plastic foam material shall be placed in the separation between the water main and the other utility (except gas lines and sewer and drain lines).

1-07.18 PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE (9-18-86)

Delete this section and replace with the following:

1-07.18(1) GENERAL (New Section) (4-20-87)

The Contractor shall obtain and maintain in full force and effect during the term of the contract, public liability and property damage insurance.

When the Contractor delivers the executed contract for the Work to the Owner it shall be accompanied by a Certificate of Insurance (or a Certificate and a binder) for a primary policy of Comprehensive General Liability insurance meeting the requirements set forth hereinafter. This Certificate of Insurance shall be subject to approval by the Owner as to company, terms, and coverages. Failure of the Contractor to fully comply with these requirements regarding insurance will be considered a material breach of contract and shall be cause for immediate termination of the contract at the option of the Owner.

The policy of insurance shall specifically name "The City of Seattle" as an additional named insured. The Owner shall be given 20 days prior written notice of any cancellation, reduction or modification of the insurance.

The Contractor shall not begin work under the contract until the required insurance has been obtained and approved by the Owner. Insurance shall provide coverage to the Contractor, all subcontractors, and the Owner. The coverage shall protect against claims for personal injuries, including accidental death, as well as claims for property damages which may arise from any act or omission of the Contractor or a subcontractor, or by anyone directly or indirectly employed by either of them.

Upon request, the Contractor shall forward to the Owner's Risk Manager a certified copy of the original policy, or endorsement obtained, to a Contractor's policy currently in force.

**1-07.18(2) COVERAGES (New Section) (9-18-86)**

The insurance shall provide the minimum coverages set forth below:

**1-07.18(2)A STANDARD (New Section) (6-21-86)**

- a. Extended Bodily Injury
- b. Employees as Additional Insured
- c. Premises/Operations Liability (M&C)
- d. Owners and Contractors Protective Liability
- e. Products and Completed Operations Liability (through guarantee period)
- f. Blanket Contractual Liability
- g. Broad Form Property Damage Liability
- h. Personal Injury, including coverages A, B, C, with no employee exclusion
- i. Stop Gap or Employers Contingent Liability
- j. Automobile Liability, including coverage for owned, nonowned, leased or hired vehicles.
- k. Explosion, Collapse, Underground Damage (referred to as "X.C.U.")

**1-07.18(2)B SPECIAL (New Section) (9-18-86)**

If the project requires working over water, the following additional coverages are required:

- l. Watercraft, owned and non-owned
- m. U.S. Harborworkers'/Longshoremen and Jones Act

Other additional coverages that may be required will be listed in the Project Manual.

**1-07.18(3) LIMITS (New Section) (9-18-86)**

- a. All coverages except when working on charged water mains or water services:  
\$1,000,000 per occurrence, no deductible;
- b. All projects requiring work on charged water mains or water services, the minimum coverage will be \$5,000,000 combined single limits on a Comprehensive General liability form or:

\$1,000,000 per person, no deductible  
\$1,000,000 per property damage, no deductible  
\$5,000,000 per occurrence, no deductible

Providing coverage in these stated amounts shall not be construed to relieve the Contractor from liability in excess of such limits.

1-07.18(4) ENDORSEMENTS (New Section) (9-18-86)

The following endorsements shall be included in all applicable policies and on the Certificate of Insurance:

ENDORSEMENTS FOR ADDITIONAL INSURED:

The City of Seattle and \_\_\_\_\_ are named additional insured for all coverages provided by this policy of insurance and shall be fully and completely protected by this policy from all claims.

If an "ACORD" form of Certificate of Insurance is provided to the Owner, it must conform to one of the following options.

Option 1. The ACORD form wording: "This Certificate is issued as a matter of information only and confers no rights upon the Certificate holder," must be deleted in its entirety.

The ACORD form wording: "Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail \_\_\_ days written notice to the below named Certificate holder, but failure to mail such notice shall impose no obligation or liability of any kind upon the company.", shall be changed to read, "Should any of the above described policies be cancelled or reduced as to coverage before the expiration date thereof, the issuing company will mail twenty (20) days written notice to the Certificate holder, the City of Seattle, and Named Additional Insured, by certified mail."

Option 2. The certificate of insurance (ACORD #25) may be used and the City will not require that the wording at the top of the form be changed. However, pursuant to RCW 48.18.290 the wording at the bottom -- "Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail \_\_\_ days written notice to the below named Certificate holder, but failure to mail such notice shall impose no obligation or liability of any kind upon the company." -- must be changed to read: "Should any of the above described policies be cancelled, changed, or reduced as to coverage before the expiration date thereof, the issuing company will mail twenty (20) days written notice to the below named certificate holder, the City of Seattle, and Named Additional Insured, by certified mail."

In addition to the Certificate of Insurance, a fully completed additional insured endorsement (GL 20 10 01 73) will be submitted. The

Certificate of Insurance and endorsement must be submitted as one document.

Option 3. If the broker/agent does not have the authority to issue the additional insured endorsement:

The broker/agent will submit an insurance binder (ACORD #75) indicating that the endorsement naming the City of Seattle as an additional insured is bound. It will also be necessary to submit the Certificate of Insurance (ACORD #25). The changes indicated on Option #2 must be made at the bottom of the Certificate of Insurance. The broker/agent must submit the endorsement prior to the insurance binder expiring. Failure to replace a binder which has expired may result in the material breach of insured's contract, and the City, at its option, may stop all work done by the insured.

Option 4. The broker/agent will submit a certified copy of the insurance policy to the City, which will include the City of Seattle and such other entities as are specifically named in the Project Manual as an additional insured.

#### 1-07.21 ROCK DRILLING SAFETY REQUIREMENTS (4-20-87)

This section is revised to read:

It shall be the Contractor's responsibility to maintain safe working conditions for rock requiring drilling, by keeping dust concentrations below the threshold limit value and by providing those protective devices that may be required by the Department of Labor and Industries.

#### 1-07.22 USE OF EXPLOSIVES (9-24-85)

Delete this section and replace with the following:

Explosives shall not be used without specific authority of the Owner, and then only under such restrictions as may be required by the proper authorities. Explosives shall be handled and used in strict compliance with "Safety Standards for Construction" by the Department of Labor and Industries, Olympia and such local laws, rules and regulations that may apply.

The Contractor shall pay for and obtain a Seattle Fire Department permit in conjunction with blasting operations. Information regarding Fire Department permits may be obtained by calling 625-4077.

When the use of explosives is necessary for the prosecution of the work, the Contractor's insurance shall contain a special clause permitting the blasting. The Contractor shall use the utmost care so as not to endanger life or property, cause slides, or disturb the materials outside the neat lines of the cross section.

Blasting shall be completed in the vicinity of new structures before construction on such structures is undertaken. All explosives shall be stored in a secure manner and place in compliance with local laws and ordinances and all such storage places shall be clearly marked "Dangerous - Explosives." Explosives shall not be left in an unprotected manner along or adjacent to any existing highway or public place.

The Contractor shall notify public utilities and railroads having facilities near the site of the work of intention to use explosives and the location, date, time and approximate duration of such blasting. Such notice shall be given sufficiently in advance to enable the companies to take such steps as they may deem necessary to protect their property from injury.

Additional specific requirements on blasting are included in Section 2-03.3(2).

#### 1-07.23 TRAFFIC CONTROL

##### 1-07.23(1) PUBLIC CONVENIENCE AND SAFETY (10-27-86)

Delete this section and replace with the following:

The Contractor shall plan and conduct construction operations such that obstruction and inconvenience to the public will be kept to a minimum. The Contractor shall not have under construction a greater length or amount of work than can be continuously and vigorously prosecuted to completion.

It is the intent of these Contract Documents that public traffic shall be permitted to pass through the work area with minimum delay, except in those areas where safety and lack of space requires detouring the traffic elsewhere. The Contractor at all times shall keep existing roads and streets adjacent to or within the limits of the project open to and maintained in a good and safe condition for traffic as determined by the Engineer.

When construction operations are such that debris from the work is deposited on the streets, the Contractor shall, as a minimum, remove on a daily basis, any deposits or debris which may accumulate on the roadway surface. Should daily removal be insufficient to keep the streets clean, the Contractor shall perform removal operations on a more frequent basis. If the Engineer determines that a more frequent cleaning is impractical or if the Contractor fails to keep the streets free from deposits and debris resulting from the work, the Contractor shall, upon order of the Engineer, remove all clay or other deposits from the tires or between wheels before trucks or other equipment will be allowed to travel over paved streets. Should the Contractor fail or refuse to clean the streets, trucks, or equipment in question, the Engineer may order the work suspended at the Contractor's risk until compliance with the Contractor's obligation is assured. Alternately, the Engineer may order the streets in question cleaned by others and such costs incurred by the Owner in achieving compliance with these contract requirements, including cleaning of the streets, shall be deducted from monies due or to become due the Contractor on monthly estimates. The Contractor shall have no claim for delay or additional costs should the Engineer choose to suspend the Contractor's work until compliance is achieved.

Existing traffic signal and highway lighting systems shall be kept in operation for the benefit and safety of the traveling public during progress of the work and the Owner will continue the routine maintenance of such existing systems.

The Contractor shall maintain convenient access for local traffic to private properties along the line of work except during some urgent stages of construction when it is impractical to carry on the construction and maintain traffic simultaneously, or when street closure is required in the preparation of the roadway for placement of asphalt pavement, concrete pavement, sewer excavation, or other construction which prohibit safe vehicular traffic. If a street is to be closed, the Contractor shall notify all property owners and tenants of street and alley closures, or other restrictions which may interfere with their access. Notification shall be at least 24 hours in advance for residential property, and at least 48 hours in advance for commercial property. When the abutting owners' access across right of way line is to be eliminated and replaced under the contract by other access, the existing access shall not be closed until the replacement access facility is available.

When maintaining traffic through graded areas, roadway excavation and the construction of embankments shall be performed in such a manner as to provide a reasonably smooth and even surface satisfactory for use by public traffic at all times. Sufficient fill at culverts and bridges to permit traffic to cross shall be placed in advance of other grading operations.

Where public traffic is routed through areas of rough grading, or any subsequent layer thereto, the surface of the roadbed of streets under construction shall be brought to a smooth, even condition. The surfacing materials shall be placed as the work progresses. Water or dust palliative shall be applied when ordered by the Engineer for the alleviation and prevention of dust nuisances.

The Contractor shall be responsible for the safety, efficiency, and adequacy of the Contractor's plant, equipment, and methods, and for any damage or injury resulting from the failure, or improper maintenance, use or operation. The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not and shall not be intended to include review and adequacy of the Contractor's safety measures in, on, or near the construction site. In order to protect the lives and health of employees performing work under the contract, the Contractor shall comply with the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions and amendments thereto; the provisions of the Washington Industrial Safety Act of 1973 (WISHA); the regulations of the State of Washington Department of Labor and Industries Division of Industrial Safety and Health, and the safety standards and provisions of applicable laws, building and construction codes, and the safety regulations set forth in "Safety Standards for Construction" and "General Safety Standards" published and in effect at the time of call for bids. These publications may be obtained from the Department of Labor and Industries, Olympia, Washington. The Contractor shall also comply with the safety standard provisions set forth in the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of

America. The WISHA regulations shall apply to all excavation, trenching and ditching operations. In case of conflict, the more stringent regulation shall apply.

Existing traffic control and street name signs which interfere with construction shall be relocated or removed by the Contractor and temporarily stored in a safe place. "STOP," "YIELD," and "ONE-WAY" signs shall be removed or relocated only upon approval of the Engineer. Existing signs shall not be removed until the Contractor has provided temporary measures sufficient to safeguard and direct traffic after the existing signs have been removed. Except as otherwise provided in the contract documents, preservation and maintenance of traffic control and street name signs shall be the sole responsibility of the Contractor.

As work progresses and as conditions permit, temporarily relocated or removed traffic and street name signs shall be reset in their permanent location by the Contractor. Signs and other traffic control devices damaged or lost by the Contractor, shall be replaced or repaired by the Contractor at no cost to the Owner. The option whether a sign can be repaired or shall be replaced shall be the Engineer's, and such decision shall be final and binding on the Contractor.

The Contractor shall maintain at the job site office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall establish, publish and make known to all employees procedures for the ensuring immediate removal to a hospital or a doctor's care, persons, including employees, who may have been injured on the job site. Employees shall not be permitted to work on the job site before the employer has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

Emergency traffic such as police, fire, and disaster units, shall be provided access at all times. In addition, the Contractor shall coordinate Contractor activities with all disposal firms and transit bus service which may be operating in the project area. Safe and convenient access to bus zones shall be provided and maintained at all times by the Contractor. The Contractor shall be liable for any damages which may result from failure to provide reasonable access or coordination.

If METRO operates in the project area, the Contractor shall maintain the project area in such a manner that transit bus service, including access to bus zones, is safe and convenient. Whenever it is necessary to modify METRO Transit Bus or Trolley Service, the Contractor shall notify the Construction Information Center, phone 684-1595, 14 days in advance.

The cost for accomplishment of all work described in this section shall be included in the various bid items comprising the improvement. No separate payment will be made.

1-07.23(2) CONSTRUCTION AND MAINTENANCE OF DETOURS (8-28-86)

Delete this section and replace with the following:

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
IT IS DUE TO THE QUALITY OF THE DOCUMENT.

1-07.23(2)A GENERAL (New Section) (8-28-86)

The Contractor shall construct, maintain in a safe condition, keep open to traffic, and remove detours that will accommodate traffic diverted from the roadway or bridge during construction. The Contractor shall construct, maintain in a safe condition, and remove detour crossings of intersecting highways and temporary approaches. A minimum of two-way traffic shall be maintained unless approved otherwise.

All on-site or off-site detours required or necessitated by the work, including side street crossings, temporary bridges over freshly placed concrete, utilization of one or more lanes of the construction area for maintenance of through traffic, and related traffic control shall be the responsibility of the Contractor.

The cost of all labor, equipment, and material necessary to fulfill the requirements of this section shall be included in the various unit bid prices of the work items included in the Bid Form. No separate payment will be made.

1-07.23(2)B TRAFFIC CONTROL PLAN (New Section) (8-28-86)

The Contractor shall submit Traffic Control Plans to the Engineer ten (10) working days prior to planned implementation. The plans shall meet the requirements of Section 1-07.23. Traffic Control Plans will be reviewed by the Engineer for vehicular and pedestrian routing, signing, etc. Acceptance of the Traffic Control Plan shall be entirely at the discretion of the Engineer. The Contractor shall implement only an approved Traffic Control Plan.

The Contractor shall not begin work in the street right of way until the approved Traffic Control Plan has been received from the Engineer. Submittal requirements shall be in accordance with Section 1-05.3(1) with the exception that no more than two (2) reproductions will be required for any Plan size.

The Contractor shall submit a separate Traffic Control Plan for all locations of work within the street right of way. Typical plans may be submitted for areas with identical traffic requirements. Typical plans will be clearly labeled to indicate all locations the plan is to represent.

The Traffic Control Plan shall indicate:

1. Vehicular and pedestrian traffic routing.
2. Proposed location of flagmen, barricades, lighting, signing, and other traffic control devices.
3. Arrangements for access to buildings within and immediately adjacent to construction site.
4. Arrangements for emergency exiting from buildings within and immediately adjacent to construction site.

5. Anticipated driveway blockage resulting from construction operations.
6. Restrictions to on-street parking within immediate vicinity of site, including arrangements for hooding parking meters as necessary.
7. Arrangements for temporary passenger and commercial loading and unloading zones, and temporary bus stop zones.
8. Identification and description of temporary lateral relocations of trolley overhead wire system if necessary to maintain trolley service.
9. Routing of construction trucks.

1-07.23(3) FLAGMEN, BARRICADES AND SIGNS (9-25-86)

Delete this section and replace with the following:

Maintenance of pedestrian and vehicular traffic within the public right of way shall be performed in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways" as supplemented by the current edition of the City of Seattle "Traffic Control Manual for In-Street Work" and such additional requirements as may be included in the contract documents. The Manual on Uniform Traffic Control Devices for Streets and Highways" (hereinafter referred to as the MUTCD) may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402. The City of Seattle "Traffic Control Manual for InStreet Work" (hereinafter referred to as the "Seattle Traffic Control Manual") may be obtained from the office of the Seattle Traffic Engineer, telephone 625-2347.

The Contractor may submit alternate proposals to those for traffic control and detours required by the MUTCD or contract documents which the Contractor believes will safely and adequately maintain vehicular and pedestrian traffic. Such alternate proposals shall be in writing and submitted to the Engineer at least 5 days in advance of their intended use. The acceptance of any proposal shall be entirely at the discretion of the Engineer and the Contractor shall have no claim by reason of a proposal being rejected or modified, nor shall there be any additional payment by reason of using such a substitute proposal.

When the signing of a particular area will be provided as detailed on one or more of the figures included in the Seattle Traffic Control Manual or the MUTCD without modification, the Contractor may reference the applicable figure, shown in the manual, at the appropriate location on the Drawings. When this procedure is used, variable distances such as minimum length of taper shall be specified by the Contractor. The spacing proposed for barricades and cones shall also be specified.

When the Contractor's proposed signing requires modification of the figures shown in the Seattle Traffic Control Manual or the MUTCD, or requires development of a special plan, the Contractor shall provide a complete detailed plan for approval by the Engineer.

Requests to use non-standard traffic control devices shall be submitted in writing to the Engineer at least 5 days in advance of their intended use. The acceptance of all requests shall be entirely at the discretion of the Engineer and the Contractor shall have no claim for delays or additional cost by reason by such requests being rejected or modified.

The Contractor, at his own expense, shall provide flaggers, signs, and other devices not otherwise specified as being furnished by the Owner, and shall erect and maintain all barricades, guards, standard construction signs, warning signs, and detour signs as are necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations which may occur on highways, roads, or streets. No work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place. The Contractor and his Surety shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.

All construction projects in street areas will be inspected with regard to type and placement of pedestrian and vehicular traffic control devices. Traffic control devices not in accordance with the Seattle Traffic Control Manual will be considered non-standard by the Engineer and shall not be used unless the non-standard traffic control device has been specifically approved for use in writing by the Engineer.

The Contractor shall furnish for the use of flaggers reflective vests and other equipment for the flagging and control of traffic. This equipment shall be used by the flaggers while actually flagging traffic. Any such equipment used which is necessary or desirable for the Contractor's personnel engaged in other activities shall also be provided. Only uniformed off-duty police officers shall be used to override or provide traffic control at signalized intersections, if the signal or beacon is made inoperative by or at the request of the Contractor, or if the Engineer determines it is necessary for traffic control.

Where parking is a hazard to through traffic or to the construction work, parking may be restricted either entirely or during the time when it creates a hazard. Approved signs for restricting parking shall be provided, placed and maintained by the Contractor. The placement of signs restricting parking shall be as approved by the Engineer.

When all or some of the necessary signs or traffic control devices are to be furnished by the Owner, it will be so specified in the contract documents. All temporary signs shall be erected on posts or temporary supports and maintained by the Contractor in a neat and presentable condition until the Engineer approves their removal.

The Contractor shall patrol at least daily the traffic control area and reset all disturbed signs and traffic control devices immediately. All nonapplicable signs shall be removed or covered during periods not needed. All control signs necessary for nighttime traffic control shall be fully reflectorized.

Upon failure or refusal of the Contractor to provide adequate flag<sup>b</sup>-rs or provide, erect, maintain, and remove, as applicable, barricades, signs and lights, on-site or off-site detours, or provide any other work as required by Section 1-07.23 or upon the Engineer's order to do so, the Engineer shall have the option to do one or any combination of the following:

- (1) suspend all work without further notice to the Contractor or the Contractor's Surety until the Contractor complies with the Engineer's order;
- (2) immediately provide uniformed police officer; or
- (3) provide, erect, maintain and remove barricades, signs and lights at the Contractor's expense by Owner forces or others and
- (4) deduct all costs related to items (1), (2), or (3) from any payments due or coming due the Contractor.

The above options shall not bar the Owner from exercising other remedies as a result of the Contractor's failure or refusal to comply with a contractual obligation.

When paint lines are obliterated due to construction activities or pavement restoration, temporary pressure-sensitive pavement marking tape, traffic buttons, or delineators shall be installed where designated by the Engineer. These temporary features shall be removed only upon installation of permanent traffic channelization.

The cost of all work required to fulfill the requirements of this section shall be included in the various bid items comprising this improvement. No separate payment will be made.

*NIC* 1-07.23(4) ONE-WAY PILOTED TRAFFIC CONTROL THROUGH CONSTRUCTION ZONE (6-21-85)

Delete the sub-paragraph under "Contractor-Furnished One-Way Piloted Traffic Control," and replace with the following:

At the discretion of the Engineer, the Contractor may be required to furnish the 2 flagmen, pilot car, and driver. The method of calculating reimbursement will be by using only that portion of Section 1-09.6 (1a, 1b, 1c, 1d) and (3) Equipment. No other part of Section 1-09.6 will apply. The labor classification for the flagmen shall be "Flaggers" and the pilot car driver shall be "Pickup Truck, Escort of Pilot Car." For the pilot car, payment shall be made at the rate for 4 x 2 conventional 1/2 ton pickup.

*NIC* 1-07.24 RIGHTS OF WAY (6-21-85)

Delete this section and replace with the following:

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Street right of way lines, limits of easements, and limits of construction permits will be indicated on the Drawings. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made. Before using any private property adjoining the work, the Contractor shall file with the Engineer a written permission of the property owner. The Contractor shall save the Owner harmless from all suits and actions of every kind and description that might result from use of private property.

Generally, the Owner will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the completion of the work. Exceptions to this will be indicated on the Drawings, noted in the Special Provisions, or brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public right of way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Owner of that private property. The Contractor shall protect the Owner on all such easements, whether permanent or temporary, and shall do all the necessary work required to fulfill the covenants and stipulations set forth in each easement agreement. Copies of the easement agreements will be included in the appendix to the Special Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer. The Contractor shall prepare his bid based on easement information included in the Contract Documents at the time of bid opening. Adjustment to the cost of construction due to easements obtained after bid opening, if any, will be made per Section 1-09.4 CHANGES.

Whenever easements or rights of entry have not been acquired prior to advertising, they will be so noted on the Drawings. The area shown on the Drawings will be accentuated by a broken line and noted "Easement to be acquired" or "Rights of Entry to be Acquired." The Contractor shall not proceed with any portion of the work in areas where easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the easement is available for construction or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Owner in obtaining easements, the Contractor will be entitled to an extension of time per Section 1-08.8. The Contractor agrees that such delay shall not be a breach of contract.

Whenever it is necessary to adjust private improvements in order to match paving or grading, the necessary rights of entry will be secured by the Engineer. The Contractor shall not enter upon private property until such rights of entry have been secured.

48 hours notice shall be given each property owner prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Owner, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other

Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases shall be filed with the Engineer prior to final acceptance.

**1-07.28 NOTIFICATIONS RELATIVE TO  
CONTRACTOR'S ACTIVITIES (New Section) (8-28-86)**

The Engineer will initially notify the public agencies and private utilities with facilities in the street right of way as to the time bids will be called, and the approximate time of starting work. The Engineer will also define what the project consists of and will point out particular problems. The Contractor shall be responsible for making detailed notifications as follows.

The Contractor performing work in street and alley rights of way and easements shall notify all of the affected public agencies and private utilities in regard to his operations so as to properly coordinate and expedite his work in such a manner as to cause the least amount of conflict and interference between his operations and those of other agencies.

Notification procedures regarding work performed in City street areas are outlined in the Seattle Traffic Control Manual for In-Street Work, Chapters II, III, VII, and VIII. Notification shall be in such detail as to give the time of commencement and completion of the work, names of streets or locations of alleys to be closed, schedule of operation, routes of detours, etc.

The Contractor shall call the Utilities Underground Location Center for field location of utilities, not less than 2 or more than 10 business days before the scheduled date for commencement of excavation which may affect underground utility facilities, unless otherwise mutually agreed to in writing by the Contractor and utility involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, State, or Federal holiday. The Utilities Underground Location Center toll-free telephone number is 1-800-424-5555. If a utility is known to or suspected of having underground facilities within the area of proposed excavation, and that utility is not a subscriber to the Underground Utilities Location Center, notice shall be provided individually to the utility.

In addition to those agencies required by the Traffic Control Manual to be notified, the Contractor shall make the following notifications:

(1) Partial or Complete Street Closure:

- (a) Within Seattle City Limits: The Contractor shall notify the Seattle Fire Department (625-4073) and Seattle Police Department (625-2696) at least 24 hours in advance of the date of actual closure.
- (b) Outside Seattle City Limits: The Contractor shall notify the King County Engineering Services (344-3820); King County Fire Marshall (344-2573), and King County Police (344-4080) at least 24 hours in advance of the date of actual closure.
- (c) Boundaries of Seattle City Limits: The Contractor shall notify the agencies set forth in both (a) and (b) above.

(2) Water Shut-Offs:

- (a) Within Seattle City Limits: The Contractor shall notify, through the inspector, the Operations Division of the Seattle Water Department 72 hours in advance of any required shut-off. Due to water supply requirements the exact timing of the shut-off will be at the discretion of the Seattle Water Department. The Seattle Fire Department will be notified by SWD Operations Division.

The Contractor shall not operate any water system valves. Operation of valves to accomplish the shut down and subsequent water main reactivation will be performed by Seattle Water Department personnel.

- (b) Outside Seattle City Limits: The Contractor shall notify the King County Fire Marshall and the King County Health Department (625-4765) 24 hours in advance of water shut-offs.
- (c) On Boundaries of Seattle City Limits: The Contractor shall notify the agencies set forth in (a) and (b) above 24 hours in advance of water shut-offs.

(3) Other Notifications:

- (a) For work on roads and highways outside the Seattle City limits, notifications shall be provided in accordance with permit and other requirements of the agency having jurisdiction over those roads and highways. The Contractor shall familiarize him/herself with those requirements prior to starting work.
- (b) Water service connections will be handled by the Engineer with a work order to the Water Department.
- (c) Where the Drawings indicate hydrant adjustment or relocation to be done "By Others", the Contractor shall notify the Seattle Water Department at 625-4184 no less than two weeks in advance of the Contractor's work to allow time for the Seattle Water Department to schedule and coordinate the work with the Contractor.

SECTION 1-08 PROSECUTION AND PROGRESS  
(August 11, 1987)

NIC 1-08.1 SUBCONTRACTING (4-20-87)

Supplement this section with the following:

Unless otherwise provided, the list of subcontractors for which the Contractor requests the Owners approval, is required within 10 working days after award of contract.

A Contractor wishing to make changes in subcontractors during the progress of the work shall submit the request to the Owner for approval.

The cost of any item of work, or portion thereof, performed under the requirements for Minority or Women's Business Enterprise participation will be deducted from the total original contract cost in the same manner as "Specialty Items," before making the subcontracting computations as stipulated in Section VII, Subletting or Assigning the Contract of U.S. Department of Transportation from PR-1273 title "REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS," included in the Contract Documents.

1-08.3 PROGRESS SCHEDULE (03-17-86)

Delete this section and replace with the following:

The Contractor shall submit a progress schedule to the Engineer for approval at the Pre-construction Meeting. The schedule shall show the proposed order of work, the expected beginning and completion times for salient work features, and completion of all work within the specified contract time.

The progress schedule shall be in the form of a Critical Path Method (CPM) Network. The CPM shall detail major work items, dates of commencement and completion of these work items and dates of availability of materials and equipment that affect the commencement or completion of these work items.

The project progress schedule shall be maintained by the Contractor during the life of the project so that an accurate indication of project progress is available. The Engineer shall be furnished, at his request, copies of the current progress schedule at any time during the life of the project.

Revised progress schedules shall be furnished by the Contractor when a delay or accumulated delays to work items, in the judgement of the Engineer, delay the final project completion date. A written explanation of all delays shall be submitted by the Contractor with each supplemental progress schedule. The form, detail and content of all CPM Networks, original and supplementals, are subject to the approval of the Engineer. If the Contractor does not comply with the above requirements, the Owner has the right to withhold progress payments in accordance with Section 1-09.9(3).

1-08.3(1) REQUIRED CONTRACTOR SUBMITTALS (5-27-86)

Required submittals include, but are not limited to, the following:

1. A method of removal and/or demolition plan and schedule.
2. Copies of permits required.
3. Traffic rerouting plan, schedule, and safeguards to be used.
4. Materials catalog-cuts.
5. Sources of materials.
6. Submittal Control Document.
7. Critical Path Schedule.

Submittals shall be forwarded to the Engineer for review and approval or rejection at least 14 calendar days prior to starting work. No monthly estimates will be processed until the above submittals are received and approved.

1-08.4 PROSECUTION OF WORK (6-21-85)

Delete this title and section and replace with the following:

1-08.4 NOTICE TO PROCEED AND PROSECUTION OF THE WORK (6-21-85)

Written Notice to Proceed will be given after the contract has been executed and the performance bond and all required insurances have been filed with and approved by the Owner. The Contractor shall not commence work under the contract until such written notice has been given by the Engineer.

The Contractor shall physically begin work within 10 calendar days of the date specified in the Notice to Proceed, or if the contract starting date is specified in the Special Provisions within 10 calendar days of such date. The Contractor shall prosecute the work vigorously and continually to completion except when it is physically impossible to do so on account of weather conditions or other unavoidable handicaps. The necessity of discontinuing and resuming work on any portion of the contract shall be determined by the Engineer.

There shall be no voluntary shutdowns or slowing of operations by the Contractor without prior approval of the Engineer and such approval shall not relieve the Contractor from the contractual obligation to complete the contract work within the prescribed contract time.

1-08.5 TIME FOR COMPLETION (6-21-85)

*NIC*  
Delete this section and replace with the following:

The contract shall be completed in its entirety within the time specified in the contract documents or as extended by the Engineer. The contract time shall begin on the date specified in the Notice to Proceed unless another date is specified in the Special Provisions. The contract documents will state the contract time in working days, calendar days, or by a definite completion date.

During the life of the contract, each successive working day shall be charged to the contract as it occurs, except any day or part thereof which is designated a non-working or unworkable weather day by the Engineer. The contract time allowed for completion of the project has been extended sufficiently to allow for periods of normal inclement weather which should be expected during the contract period and, during which periods, work is anticipated to be performed. If the Contractor elects not to perform work during periods of normal inclement weather, the Contractor will not be entitled to an extension of time for periods of nonwork. However, abnormal inclement weather, such as prolonged periods of snow, subfreezing temperatures, above average rainfall, or other unusual weather disturbances during which periods the Contractor elects not to perform work, if declared by the Engineer to be unworkable days due to weather conditions, shall be a nonworking day for which the Contractor will be entitled to an extension of time.

The Engineer will furnish the Contractor a weekly statement showing the number of days charged the Contractor. The Contractor will be allowed 10 calendar days, from the date of the report, in which to file a written protest of any alleged discrepancy in said weekly statement. Otherwise, the statement shall be deemed to have been accepted by the Contractor as correct.

If all work is satisfactorily completed within the contract time, no action need be taken by either the Contractor or the Owner with respect to an extension of time or liquidated damages.

Upon completion of all work required by the contract, the Engineer pursuant to Section 1-05.11 will advise the Contractor and Owner in writing of the date on which such work was completed, taking into account weather delays and other approved time extensions. Such date shall constitute the date of completion of the contract. Such notification of date of completion shall not constitute acceptance of the work by the Owner. (See Section 1-05.12 Final Acceptance.)

*NIC* 1-08.8 EXTENSIONS OF TIME (6-21-85)

Supplement this section with the following:

The Contractor shall not be entitled to any claim for damages because of unavoidable delays, but may be entitled to an extension of time in the above cases.

The Contractor's approved schedule in effect at the start of the claimed delay will be used to evaluate the extent of the delay, and the delay's affect on contract completion time.

1-08.11 OVERTIME WORK BY OWNER EMPLOYEES (New Section) (4-20-87)

1-08.11(1) HOURS OF WORK (New Section) (4-20-87)

Except in case of emergency or unless otherwise approved by the Engineer, the normal straight time working hours for the work shall be any consecutive 8 hour working period between 6:00 a.m. and 7:00 p.m. of a working day, excluding the lunch period (maximum 1 hour). The normal straight time 8-hour working period for the contract shall be established at the preconstruction conference or prior to the Contractor commencing the Work and shall not be changed during the duration of the project without approval of the Engineer.

If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 6:00 a.m. or after 7:00 p.m. on any day, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 6:00 a.m. and 7:00 p.m. is not required.

Request to perform work on Saturdays between 6:00 a.m. and 7:00 p.m. only requires the approval of the Engineer. Such requests shall be submitted to the Engineer no later than noon on the working day prior to the Saturday for which the Contractor is requesting permission to work.

Requests to perform work on holidays, Sundays, or before 6:00 a.m. or after 7:00 p.m. on any day requires approval of the Owner. Such request shall be submitted to the Owner via the Engineer no later than 10 days prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays is subject to the noise control requirements set forth in Seattle Municipal Code 25.08. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the noise control regulations or a complaint is received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain conditions set forth by the Owner or Engineer. These conditions include, but are not limited to, requiring the Engineer or such Inspectors as the Engineer may deem necessary to be present during the Work. Such other Owner employees include, but are not limited to, survey crews; personnel from the Owner's material testing lab; inspectors; and other Owner employees from the administering or other departments, when in the opinion of the Engineer, such work necessitates their presence.

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1-08.11(2) REIMBURSEMENT FOR OVERTIME WORK OF OWNER  
EMPLOYEES (New Section) (4-20-87)

The normal straight time salary for work performed by Owner employees during normal working hours of a calendar day is based upon the hourly rate of pay established by the current City salary ordinance for the particular job classification of the Owner employee concerned multiplied by 8 hours. A normal work week consists of 40 hours.

Overtime for Owner employees consists of those hours worked by Owner employees in excess of 8 hours in one calendar day or 40 hours in one week. Overtime for Owner employees required to be present when the Contractor's or a subcontractor's forces are working is classified as essential overtime and will be paid at two times the normal straight time salary rate.

Whenever the Contractor elects to work on a Saturday, Sunday, holiday and longer than 8 hours in any one calendar day, the salary costs for essential overtime incurred by the Owner shall be reimbursed by the Contractor. The Contractor agrees and authorizes the Owner to deduct the reimbursable salary costs from amounts due or to become due the Contractor on monthly or final progress payments.

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SECTION 1-09 MEASUREMENT AND PAYMENT  
(August 11, 1987)

1-09.1 MEASUREMENT OF QUANTITIES (6-21-85)

Delete paragraph 10 and replace with the following:

Each truck shall bear a plainly legible identification mark or number. The term "ton" means the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weight will be weighed according to the requirements of Section 1-09.2. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty at least daily or at such times as the Engineer directs.

Duplicate tally tickets shall be prepared to accompany each truck load of material delivered to the project. The duplicate tickets shall be furnished to the Engineer at the time of delivery to the project site. The tickets shall be legible and contain the following information:

1. Ticket serial number. (This is already imprinted on the tickets.)
2. Identification number of truck/truck trailer.
3. Date and hour of weighing.
4. Type of material.
5. Weight of load, including Gross, Tare and Net Weights. If the scale has a tare beam so the net weight can be read directly, only the net weight need be recorded on the ticket.
6. Weigher's identification.
7. Item number.
8. Contract number.
9. Unit of measure.
10. Legal gross weight in remarks section.

The net weight of aggregates measured by the ton that is being placed in each truck shall be printed on the ticket by an automatic weighing device from a certified scale. Alternately, the weighmaster shall place the weighmaster's seal and signature indicating that the weight written on the ticket is accurate.

Mineral aggregates measured by the cubic yard will be measured compacted in place in accordance with neat line dimensions as indicated on the Drawings and/or Standard Plans.

Delete paragraph 12 and replace with the following:

Cement shall be measured by the pound, ton, or sack. When measured by the sack, a sack shall mean a sack weighing 94 pounds.

Supplement paragraph 15 with the following:

The cost breakdown shall include the item name, quantity, unit price and total amount.

*NK* 1-09.2 WEIGHING EQUIPMENT (6-21-85)

Delete paragraph 1 under the subsection labelled "General Requirements for Weighing Equipment" and replace with the following:

Equipment for weighing construction materials shall be accurate within 1/2 percent of the correct weight throughout the range of use. It shall be the Contractor's responsibility to provide scales with beams or dial scales or other reliable equipment built and erected in a manner which will prevent displacement, binding, or vibration of the various components. The use of spring balances will not be permitted.

Delete paragraph 2 under the subsection labelled "Specific Requirements for Platform Scales," and replace with the following 2 paragraphs:

A platform scale operator shall be designated by the Contractor to weigh all materials on the Contractor's platform scales and make the records thereof. If the Contractor elects to use commercial scales, the Contractor shall furnish approved load tickets at the scale and legible duplicate copies to the Engineer at the delivery point and guarantee permission for Owner personnel to periodically observe the weighing and to check and compile the daily record of scale weights. Tare weights shall be taken of each conveyance at least twice daily.

All commercial and certified weighers are required to check the scales at least daily. The scale check methods and documentation procedures for scale checks and tare weights will require approval by the Engineer. Checks shall be made throughout each day to see that the scales are balanced and return to zero when no load is on them.

*NK* 1-09.3 SCOPE OF PAYMENT (9-24-85)

Supplement this section with the following:

The payment items listed in the bid form shall be the only items for which compensation will be made for the work described in and specified in the particular section. Should an item so listed or referenced in the "payment" clause of the Standard Specifications not be included in a Bid Form for a particular contract, and is not otherwise provided for by some modification of the "payment" clause in the Project Manual to make it incidental to various items in the project, and work for which that item provides compensation is performed, then payment will be made as extra work.

The words "Bid Item," "Contract Item," and "Pay Item," when used in the contract documents shall be synonymous.

Payment for the bid items listed or referenced in the "payment" clause of any particular section of the Specifications shall be considered as including all of the work required, specified, or described in that particular section. Payment items will generally be listed generically in the Specifications, [e.g., "Manhole, (Type)]" and specifically in the Bid Form (e.g. "Manhole, Type 130"). When items are to be "furnished" under one payment item and "installed" under another payment item, such items shall be furnished FOB job site, or, if specified in the Special Provisions, delivered to a designated city site. Materials to be "furnished," or "furnished and installed" under these conditions, shall be the responsibility of the Contractor with regard to storage until such items are incorporated into the work or, if such items are not to be incorporated into the work, delivered to the site provided for in the Special Provisions. Payment for material "furnished," but not yet incorporated into the work, may be made on monthly estimates to the extent provided for in Section 1-09.8.

Modification of payment items in this manner shall not change the intent of the Specifications relating to these items.

The Contractor shall submit a schedule of estimated breakdown of costs for "lump sum" items in a form acceptable to the Engineer before partial payments will be made for such items. This estimated breakdown of costs shall include items for the main classification of the work and shall total the amount of the lump sum bid item. Unless otherwise provided in the Special Provisions, partial payment for materials will be made only after such material has been incorporated in the work. The values in the schedule will be used for determining partial payments, and so far as they apply, as a basis for payment for additional ordered work changes.

This detailed cost breakdown shall be submitted to the Engineer within 14 calendar days after contract award.

*vic* 1-09.4 CHANGES (6-21-85)

Delete this section and replace with the following:

Adjustments, if any, in the amounts to be paid the Contractor by reason of any change, addition, or deduction, as defined in Section 1-04.4, shall be determined by one or more of the following methods:

- (1) By an acceptable lump-sum proposal from the Contractor.
- (2) By unit contract prices contained in the contract proposal, or by unit prices mutually agreed upon by the Contractor and the Owner.
- (3) By force account as specified in Section 1-09.6.

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If the parties are unable to agree, the Engineer will determine the compensation, or, if deemed appropriate by the Engineer, compensation will be paid by force account as provided in Section 1-09.6.

It shall be the responsibility of the Contractor before proceeding with any change to satisfy himself that the change has been properly authorized in behalf of the Owner. No charge for extra work or any other change in the contract will be allowed unless the extra work or change has been authorized in writing by the Owner, and the compensation or method thereof is stated in such written authority.

When payment for extra work is by lump sum agreed price or by unit prices mutually agreed upon by the Contractor and the Owner, the Contractor shall include in his agreed prices, retail sales tax on taxable materials when such extra work is for improving public roads. When the extra work is for water systems, sanitary sewer systems, sewage disposal facilities, or other work not related to public roads, the Contractor shall not include retail sales tax in his agreed prices. The Contractor is advised that the sale to him of necessary material, supplies, etc., are sales for resale and the Owner will pay to the Contractor the retail sales tax on the entire extra work.

Payment by methods (1) and (2) shall include all costs for overhead and profit except that any markups for overhead and profit included in any computation requested to justify a lump sum agreed price shall be limited to those permitted for method (3), force account, as stated in Section 1-09.6.

NIC  
1-09.6 FORCE ACCOUNT (7-03-86)

Delete paragraph 2 (including the sentence that begins "The 10 percent supplemental markup . . ." and replace with the following:

When work is performed on a force account basis by approved subcontractors, the Contractor will be allowed an additional markup equal to 5 percent of the total cost computed for 1, 2, and 3 above for all administrative costs.

Supplement this section with the following:

4. Specialized Services: Under agreement between the Engineer and the Contractor, it may be determined that a certain item or service under Force Account cannot be satisfactorily performed by the forces of the Contractor or his subcontractor because of lack of skills, or lack of resources, or other reasons. In such case, the speciality item or service may be performed by a specialist. Payment for such special item or service will be made on the basis of invoices provided by the Contractor. Such invoices shall itemize the labor, material and equipment costs when such itemization is practicable. If the Engineer determines that such itemization is impractical or not a customary trade practice, the invoice for such special item or service may be made on the basis of the current market price.

The specialist invoices shall show credit for cash or trade discounts offered or available, the same as applies to Force Account work.

Where the Force Account work necessitates fabrication or machining work by the Contractor away from the job site, charges for such work may, by agreement with the Engineer, be accepted as a specialist billing.

An amount equal to 15% of the total invoice from the specialist shall be added for overhead, profit and all other costs incurred by the Contractor in furnishing and providing such specialized work. No additional markup will be allowed.

Nothing contained herein shall waive the contract requirements for meeting the applicable prevailing wage rates or submittal of certified payrolls by the Contractor or subcontractors (including those providing "Specialized Services").

The Owner reserves the right to (1) disallow invoice payments based on rates higher than those customary for similar types of work, (2) request a detailed breakdown of the invoice or further documentation which justifies the requested payment, and (3) in the event payment by invoice is disallowed, to make payment using the elements specified under subparagraph 1, 2, and 3 above.

*NIC* 1-09.7 MOBILIZATION (6-21-85)

Delete last paragraph and replace with the following:

Nothing herein shall be construed to limit or preclude partial payment otherwise provided by the contract, except when Engineering Field Office is specified in the Special Provisions, no partial payment will be made until such field office is provided and in service.

*NIC* 1-09.8 PAYMENT FOR MATERIAL ON HAND (9-24-85)

Delete this section and replace with the following:

Partial payments, to the extent of 90% of the invoiced cost of materials excluding taxes, or the unit bid price whichever is less, may be made on monthly estimates for materials not yet incorporated into the completed work if the materials meet all of the following conditions:

- (1) Meet the requirements of the contract based upon inspections or testing by the Engineer.
- (2) Are delivered to project site or are stockpiled at an offsite storage facility specifically approved by the Engineer.
- (3) Are properly stored and protected.
- (4) Insured as to loss, damage, and title per Section 1-07.18.

In addition to the requirements of (1) and (3) above, material delivered to the project site or to an off-site storage facility as permitted in (2) above will be considered for partial payment only if the following additional conditions are met:

- (1) The storage of materials is required for more than 30 calendar days.
- (2) The material stored off-site is segregated from materials for any other project.
- (3) Is tagged, labelled, or otherwise identified as belonging to the project.
- (4) The cost of transportation to the site is excluded from payment or other provisions acceptable to the Engineer are made with regard to eventual delivery to the job site.

The cost of other materials on hand will be determined by invoices from a material supplier in sufficient detail to determine the actual cost. The Contractor shall furnish the Engineer a paid invoice within 60 days of the initial payment. If the paid invoice is not furnished in the prescribed time, and the material has not been incorporated into the job, any payment that has been made will be deducted from the next progress estimate until the paid invoice is furnished.

Materials eligible for payment will include but are not necessarily limited to: pipe, reinforcing steel, bronze plates, structural steel, machinery, piling, timber and lumber (not including forms or false work), large signs peculiar to the specific project, and prestressed concrete beams and girders, traffic or light poles, and signal equipment.

Requests for payment for individual items or group of items of material on hand, amounting to an invoice total of less than \$500 will not be considered by the Engineer for partial payments. Payment for sales taxes due on the purchase of such material or equipment will not be made unless said taxes were paid by the Contractor to the materialman or fabricator for transmittal to the State by the materialman or fabricator and such tax is included on the bill of sale issued by the materialman.

Payment for materials will not constitute acceptance. Faulty material will be rejected even though payment may have been made for such material in a pay estimate.

Deductions at the same rates and equal in amount to the payment for material on hand will be made to the estimates as material is incorporated into the work and paid at the unit contract price or, for a lump sum item, the estimates percentage of the lump sum price. Deductions, at the same rates and equal in amount to the payment for material on hand, will also be made for material on hand which is rejected after a payment was made.

*NIC* 1-09.9 PAYMENTS (6-21-85)

Delete this section and replace with the following 4 subsections:

*NIC* 1-09.9(1) PROGRESS PAYMENTS (New Section) (06-04-86)

The Contractor is entitled to monthly progress payments corresponding to the stage of work, as determined by progress estimates prepared by the Engineer (provided he has fulfilled the required conditions of the contract as outlined in Section 1-09.9.3). A progress estimate cutoff date will be established at the preconstruction meeting. Progress estimates will be prepared no later than 30 calendar days after the Contractor commences work and every month thereafter for the duration of the work.

Progress payments shall be based upon the Engineer's estimates of the completed quantities of acceptable work accomplished prior to the cutoff date multiplied by the unit prices (or percentage of a lump sum price) established in the contract, less any sums previously paid or monies allowed to be withheld under the terms of the contract. Quantities used for progress estimates shall be considered only as approximate and provisional, subject to recalculation, adjustment, and correction by the Engineer in subsequent progress estimates and the final estimate. Inclusion of any quantities in progress estimates, or failure to disapprove the work at the time of the progress estimate, shall not be construed as acceptance of the corresponding work or materials.

The Contractor, by accepting a progress or final payment, as applicable, warrants good title as required by Section 1-05.10(2) to all materials, and supplies purchased for or incorporated into the work.

Subcontractors shall be entitled to monthly progress payments, corresponding to the state of their work, upon the Contractor's receipt of payment from the Owner. Payment shall be out of the amount paid to the Contractor on account of such subcontractor's work, the amount, to which said subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such subcontractor's work. The Contractor shall, by an appropriate agreement with each subcontractor, require each subcontractor to make payments to lower tier subcontractors in similar manner.

The Contractor further warrants that by acceptance of each progress payment or final payment that all previous progress payments received on account of the work have been applied to discharge in full, less applicable retainage, all of the Contractor's obligations reflected in prior progress payments.

*NIC* 1-09.9(2) RETAINAGE (New Section) (9-24-85)

As required by RCW 60.28 there will be reserved and retained from monies earned by the Contractor on estimates during the progress of the work a sum equal to the maximum amount allowed by law. Such retainage shall be used as a trust fund for the protection and payment (1) to the State with respect to taxes imposed pursuant to Title 82, RCW which may be due from such Contractor, and (2) of any

person or person mechanic, subcontractor or materialman who shall perform any labor upon such contract whether doing the said work and all persons who shall supply such person or persons or subcontractors with provisions or supplies for carrying on such work.

Monies reserved under provisions of RCW 60.28 shall, at the option of the Contractor, be:

- (a) Retained in a fund by the Owner until 30 days following the final acceptance of the work as completed;
- (b) Deposited by the Owner in an interest-bearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until after the final acceptance of said improvement or work as completed or until agreed to by both parties;
- (c) Placed on escrow in a bank or trust company by the Owner until 30 days following the final acceptance of the work as completed. When the monies reserved are to be placed in escrow the Owner will issue a check representing the sum of the monies reserved payable to the bank or trust company and the Contractor jointly. Such check shall be converted into bonds and securities chosen by the Contractor and approved by the Owner and the bonds and securities held in escrow.

Under option (b) and (c), interest will be paid to the Contractor as the interest accrues. The Contractor shall designate the option desired on the form included with the contract documents titled, "Declaration of Option for Management of Statutory Retained Percentage". This form shall be submitted at the time the Contractor executes the contract with the City and shall be part of the contract. The Contractor in choosing option (b) or (c) agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

Release of retained percentage will be made 30 days following final acceptance by the Owner provided the following four conditions are met:

1. A certified statement per Section 1-06.5 has been received by the Engineer setting forth the nature and source of non-American made material in excess of \$2,500 used by the Contractor.
2. Releases have been obtained from the State Department of Labor and Industries, the State of Washington Employment Security Department, and all other departments and agencies having jurisdiction over the activities of the Contractor.
3. On contracts totalling more than \$20,000.00, a release has been obtained from the Washington State Department of Revenue.
4. No claims, as provided by law, have been filed against the retained percentage.

In the event claims are filed the Contractor shall be paid such retained percentage less an amount sufficient to pay any such claims together with a sum determined by the Owner sufficient to pay the cost of such action and to cover attorney's fees.

Retainage will not be reduced for any reason below the minimum limit allowed by law.

*NIC*  
1-09.9(3) OWNER'S RIGHT TO WITHHOLD OR  
DEDUCT CERTAIN AMOUNTS (New Section) (06-04-86)

In addition to monies retained pursuant to RCW 60.28, the Contractor authorizes the Engineer to withhold progress payments or deduct an amount from any payment or payments due the Contractor which, in the Engineer's opinion, may be necessary to cover costs for or to remedy the following situations:

- (a) Failure of the Contractor to submit and obtain approval of a construction schedule as required in Section 1-08.3.
- (b) Where the Contractor has not provided the Engineer with a field office when the project specifically calls for it.
- (c) Failure of the Contractor to submit and obtain approval of a Submittal Control Document.
- (d) Failure to submit Traffic Control Plan when project specifically calls for it.
- (e) The work or any part is defective, or completed work has been damaged requiring correction or replacement, or to correct defective work not remedied by the Contractor.
- (f) For overtime work performed by Owner personnel as set forth in Section 1-08.11.
- (g) Lack of construction progress based upon the Engineer's review of the Contractor's approved progress schedule which, indicates that the work will not be completed within the contract time. When calculating an anticipated time overrun, the Engineer will make allowances for weather delays, approved unavoidable delays, and suspensions of work. The amount withheld under this subparagraph will be based upon the liquidated damages amount per day set forth in the contract multiplied by the number of days the Contractor's approved progress schedule, in the opinion of the Engineer, indicates the contract may exceed the contract time.
- (h) The estimated cost of completing the contract, when, in the Engineer's opinion, there is doubt that the contract can be completed for the unpaid balance.

- (i) Damage to another contractor when there is evidence thereof and a claim has been filed.
- (j) Failure to submit weekly payrolls.
- (k) Where the Contractor is obligated to pay fees or charges of public authorities or municipalities and has not paid.
- (l) The contract price has been reduced because of modifications.
- (m) Failure of the Contractor to perform any of the Contractor's other obligations under the contract.

The Contractor, by signing the contract, authorizes the Owner to disburse and have the right to act as agent for the Contractor disbursing such funds as have been withheld pursuant to this paragraph to any party or parties who are entitled to payment therefrom. Disbursement of such funds, if the Owner elects to do so, will be made only after giving the Contractor 15 days prior written notice of the Owner's intent to do so, and if prior to the expiration of the 15 day period, no legal action has commenced to resolve the validity of the claims.

The Owner will render to the Contractor a proper accounting of all funds disbursed on behalf of the Contractor in accordance with this section. Any payment made by the Owner pursuant to this section shall be considered as payment made under the contract by the Owner to the Contractor. The Owner shall not be liable to the Contractor for such payment made in good faith.

If legal action is instituted to determine the validity of the claims prior to expiration of the 15 day period mentioned above, the Owner will hold the funds until determination of the action or written settlement agreement of the parties.

*MC*  
1-09.9(4) FINAL PAYMENT (New Section) (6-21-85)

Upon completion and acceptance of all work by the Owner the final amount to be paid the Contractor under the contract will be calculated based upon the final estimate made by the Engineer. Acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor, other than claims in stated amounts as may be specifically expected in writing by the Contractor, for all things done or furnished in connection with this work and for every act and neglect by the Owner and other claims and liability relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the Contractor or the Contractor's sureties for any obligations under the contract documents or the performance bond.

1-09.11 APPLICA. & LAW AND VENUE (New Section) (6-21-85)

*NIC* This contract shall be construed and interpreted in accordance with the laws of the State of Washington. The venue of any claims or causes of action arising from this contract shall be in the Superior Court of King County.

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8/7/87

SPECIAL PROVISIONS  
GUIDEWAY PIERS AND VAULTS - CONTRACT 4

DIVISION 0

- 0-1.04 PLANS AND SPECIFICATIONS
- 0-1.05 LOCATION OF PROJECT
- 0-1.06 SCOPE OF WORK

DIVISION 1

- 1-05.5(2) BRIDGE AND STRUCTURE SURVEYS
- 1-07.5(3) NOISE POLLUTION
- 1-07.23 TRAFFIC CONTROL
- 1-07.23(1) PUBLIC CONVENIENCE AND SAFETY
- 1-08.3(2) OTHER MONORAIL CONTRACTS
- 1-08.3(3) OTHER INTERFACE PROJECTS
- 1-08.3(4) KEY MILESTONES OF RELATED PROJECTS
- 1-08.3(5) KEY PROJECT CONSTRAINTS
- 1-08.9 LIQUIDATED DAMAGES (FAILURE TO COMPLETE WORK ON TIME)

DIVISION 2

- 2-02.5 DESCRIPTION
- 2-02.5 PAYMENT

DIVISION 6

- 6-02.1 DESCRIPTION
- 6-02.3(17)K WORKMANSHIP
- 6-05.3(7) SHAFTS
- 6-05.3(7)A DESCRIPTION
- 6-05.3(7)B SHAFT CONSTRUCTION TOLERANCES
- 6-05.3(7)C SUBMITTALS
- 6-05.3(7)D CONCRETE
- 6-05.3(7)E CASING
- 6-05.3(7)F SHAFT EXCAVATION
- 6-05.3(7)G ASSEMBLY AND PLACEMENT OF REINFORCING STEEL
- 6-05.3(7)H PLACING CONCRETE
- 6-05.3(7)I CASING REMOVAL
- 6-05.4 MEASUREMENT
- 6-05.5 PAYMENT

DIVISION 8

- 8-33 CONDUIT AND TRENCHING
- 8-34 PRE-CAST CONCRETE VAULT

DIVISION 9

- 9-34 ELECTRICAL AND SIGNAL CONDUITS

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DIVISION 10      MECHANICAL  
10-01            HVAC EXHAUST  
10-02            HVAC EMBEDDED DUCTS  
10-03            SUMP DISCHARGE PIPES

DIVISION 11      ELECTRICAL  
11-00            ELECTRICAL-GENERAL  
11-01            ELECTRICAL SITE WORK  
11-02            ELECTRICAL RACEWAYS  
11-03            GROUNDING

DIVISION 12      ARCHITECTURAL  
12-01            LIMESTONE VENEER  
12-02            STAIR RAILING  
12-03            METAL DOORS, FRAMES AND HARDWARE  
12-04            MEMBRANE ROOFING  
12-05            SIGNAGE  
12-06            SEALER  
12-07            WATERPROOFING

APPENDIX

SEATTLE CITY LIGHT CONSTRUCTION STANDARDS

- U2-12.1, SUMP DISCHARGE PIPE  
INSTALLATION.
- U2-13, INSTALLATION OF 687 TYPE VAULTS  
AND LARGER.
- U8-7.3, VAULT GROUNDING

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0-1.04 PLANS AND SPECIFICATIONS

The work shall be performed in accordance with these amendments and special provisions together with the provisions, insofar as they are applicable, of the following documents:

1. The Director of Engineering Plans, Drawing No. <sup>782-163</sup> xxx-xxx, Sheets 1 through 26.
2. The City of Seattle Standard Plans and Specifications, which are comprised of:
  - a. "1984 Standard Specifications for Road, Bridge and Municipal Construction," as prepared by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association (hereinafter referred to as APWA Standard Specifications).
  - b. "City of Seattle Supplement to Standard Specifications for Road, Bridge, and Municipal Construction and Standard Plans, 1986 Edition."
  - c. "Traffic Control Manual for In-Street Work, Seattle, Washington, January 1, 1976", which supplements and is to be utilized in conjunction with the "Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 1978 Edition," as published by the Department of Transportation, Washington, D.C.
3. The terms and conditions of such permits, agreements, ordinances, regulations, instructions and requirements as may be included in the appendix or otherwise attached hereto.

0-1.05 LOCATION OF PROJECT

Generally the Guideway Piers and Vaults work to be performed under this contract is that portion of work adjacent to the Westlake Center project along the west side of Fifth Avenue between Olive Way and Pine Street. All work will be located within the Fifth Avenue right-of-way. Certain portions of work in this area are specifically excluded from this contract as outlined in Section 1-08.3(2).

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0-1.06 SCOPE OF WORK

The Guideway Piers and Vaults work to be performed under this contract generally includes construction of cast-in-place concrete Monorail beam support piers, drilled-shaft foundations and underground equipment vault; structural excavation, shoring and structural backfill; furnish and installation of preconstructed transformer vault; removal of pavement; removal and restoration of cement concrete sidewalk; partial removal of existing caisson foundation; concrete electrical duct banks (including trenching, conduit placement and backfilling); traffic control; installation and construction of HVAC exhaust structure and embedded ducts, application of stone veneer to guideway piers, and other such related and incidental work as may be necessary in connection therewith.

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1-05.5(2) BRIDGE AND STRUCTURE SURVEYS

Delete paragraphs (a) and (b) and substitute the following therefor:

\* Pier centerlines \*

Add the following new paragraphs after "(d) ... on the Drawings":

\*These points will be staked on the ground by the Engineer, and it shall be the Contractor's responsibility to transfer the applicable points to the elevation of the Monorail beams.

The Contractor shall use only those survey control points shown in the Drawings (Monuments Nos. 30, 213, and 1356 for horizontal control, and Control Reference Monument MTC 11N for vertical control) for establishing secondary control for the location of new facilities. \*

1-07.5(3) NOISE POLLUTION

Add the following to this Section.

\*Jackhammering and other similar work shall not be performed after 9PM or before 7AM (or before 10AM on Sundays) at the site, except as specifically authorized by the Engineer.\*

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1-07.23 TRAFFIC CONTROL

Add the following to this section:

\*The movement of oversized loads, such as preconstructed electrical vault, shall be done between the hours of 12 midnight to 5AM on weekdays and Saturdays or during the day on Sundays. An escort car is required for these oversized movements. The movement route for oversized loads shall be approved by the Engineer prior to the start of the movement. Any overhead traffic signal spans needing temporary removal for equipment movement shall be removed on a Sunday and placed in service prior to 6:00 am the following Monday. A police officer is required during the time the signal is out of service. At least five working days notice shall be given to the Engineer prior to the temporary removal of any signal span.

The Contractor shall provide temporary traffic control plans for approval by the Engineer at least 10 working days prior to commencing construction. These shall include temporary pavement markings and signing which shall be properly maintained throughout the project, as described in subsequent sections. \*

1-07.23(1) PUBLIC CONVENIENCE AND SAFETY

Insert the following before the last paragraph of this Section.

\*The Contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, and any other needed actions to protect the life, health, and safety of the public and to protect property in connection with the performance of the work covered by the contract. The Contractor shall perform any measures or actions the Engineer may deem necessary to protect the public and property. Such directions, however, shall not diminish the Contractor's sole responsibility for safety. Special emphasis shall be given by the Contractor, in the case of overhead work, to adequate protection against falling objects and to the protection of workers from falling.

The Contractor shall not drive on or use adjacent private property for construction purposes unless agreement allowing such access is reached with the property owner. The Contractor shall submit a copy of such agreement to the Engineer prior to entering adjacent private property. The Contractor shall not drive, park, place equipment on or otherwise endanger areaway structures located under streets or sidewalks, whether or not shown on the plans.\*

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### \*1-08.3(2) OTHER MONORAIL CONTRACTS

The project to relocate the Monorail guideway and existing Westlake Station will be implemented under multiple contracts, one of which is this Guideway Piers and Vaults contract, Contract 4.

The major Monorail contracts are summarized as follows:

- Construction of Temporary Station. (Completed)
- Demolition of existing guideway and station at Westlake. (Completed)
- Construction of relocated guideway (Board of Public Works portion, Guideway Relocation, Contract 3).
- Construction of relocated guideway (The Rouse Company portion, Guideway Piers and Vaults, Contract 4).<sup>1</sup>
- Construction of the new Westlake Station.<sup>1</sup>
- Demolition of Temporary Station

<sup>1</sup> These contracts will be implemented as part of the Westlake Center project.

The guideway relocation work has been split into two contracts; this contract, Contract 4 and a separate contract, Contract 3. This division of work is necessary because the southern terminus, Westlake Station, is to be integrated with the Westlake Center project. Thus, a portion of the relocated guideway also becomes an integral part of the Westlake Center necessitating a high level of coordination between the two construction projects at this location.

Conversely, some of the relocation work is not as closely tied to the Westlake Center project. This portion of the work will be completed under the other contract, Contract 3 and will be let as a Board of Public Works (BPW) contract. Contract 3 work will be performed simultaneously with Contract 4 (see Section 0-1.06 for Contract 4 scope of work). Specific portions of the guideway relocation work which will be performed adjacent to the Westlake Center under Contract 3 by the BPW contractor and not under this contract include: construction of end-of-line bumper pier, installation of prestressed concrete Monorail guidebeams with bearing pad assemblies and installation of traction power pick-up rails. Due to the integrated nature of the work, the Contractor shall coordinate all work under this contract with the City's contractor executing Contract 3. \*

### \*1-08.3(3) OTHER INTERFACE PROJECTS

The Monorail's Westlake terminus is being relocated primarily because it occupies the site of the new Westlake Center. Also, part of the station foundations conflict with the construction of the METRO Downtown Seattle Transit Project (DSTP). Therefore, relocation work under Contract 4

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must be coordinated with the Westlake Center construction and METRO's construction of the DSTP's underground Westlake Station all of which will occur simultaneously. Coordination with the Westlake Center construction will be the Contractor's responsibility. Although direct involvement with DSTP work is not anticipated, coordination between the two projects is required since DSTP work will involve street modifications adjacent to the Contract 4 Guideway Piers and Vaults work.

Agreements between the City and the downtown business community require that disruptive surface construction activities not take place in the project area between November 1, 1987 and January 3, 1988.

Milestone dates for this contract have been established :

<u>Milestone</u>	<u>Milestone Date</u>
Piers 60, 61, 62, 63 ready for beam placement...	Feb. 12, 1988
Complete Construction of Vaults.....	Feb. 28, 1988

\*1-08.3(4) KEY MILESTONES OF RELATED PROJECTS

The required sequence of implementation of this contract and other interface projects is summarized below :

	<u>Milestone Date</u>
Start Westlake Center Construction.....	Jan. 2, 1987
Start METRO Downtown Transit Project.....	Jan. 2, 1987
Start Erection of Guideway Beams.....	Feb. 5, 1988
Complete Construction of Piers 60, 61, 62, 63...	Feb. 12, 1988
Complete Construction of Vaults.....	Feb. 28, 1988
Start Installation of Equipment in Vaults.....	Mar. 1, 1988
Complete Relocated Guideway Construction.....	Apr. 15, 1988
Complete Westlake Center Mall (incl. new monorail station).....	Aug. 1, 1988 *

\*1-08.3(5) KEY PROJECT CONSTRAINTS (NEW SECTION)

The following describes key project constraints, requirements, sequences, etc., that are not covered elsewhere in these specifications and provides a concise description of the project sequence and interfaces as an aid to bidders and the Contractor. This description is not all inclusive and it does not supersede other portions of these specifications.

1. Holiday Construction Freeze - No construction activity for this project may occur from November 1, 1987 through

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January 3, 1988, inclusive. During this period the Contractor must be demobilized and all construction work and storage areas cleaned up. All excavations must be filled and patched or otherwise covered, as approved by the Engineer, such that normal traffic and pedestrian usage may safely take place during this period.

2. Drilled Shaft Foundations/Underground Equipment Vault/Duct Banks - Construction sequencing of these elements of work is critical to maintain the integrity of the load-carrying capacity of the soil. First, the vault area shall be excavated as an open cut with shoring provided to minimize disturbance of surrounding soils. Trenching and construction of duct banks shall be performed at the bottom of the vault excavation. Backfilling of the trenches shall be in several lifts to obtain equal or greater soil bearing capacity. Then, the equipment vault should be constructed. Backfilling of the vault area shall consist of approximately 1 foot lifts of select backfill material each compacted to provide a structurally substantial backfill equal to or greater than the undisturbed soil's capacity. After vault construction is entirely completed the drilled shaft foundation construction can begin for Piers 62 and 63. Care shall be taken to minimize additional disturbance of the surrounding soils.
3. Partial Caisson Foundation Removal - Previous demolition of Column No. 60 left the below-grade caisson foundation intact for possible support of the relocated guideway pier near the same location. Since the new Pier 60 is substantially away from the existing foundation, the old caisson is to be removed down to approximately 6 feet below grade to facilitate possible utility construction in the area at a later date.
4. Closures of Fifth Avenue for any portion of this work, for example duct bank construction, shall be coordinated to coincide with other necessitated closures of the street by the METRO DSTP contractor to minimize total street closure duration. See Section 1-07.23.
6. The Contractor will apply the stone veneer to Pier No. 64, which will be constructed as part of Contract No. 3. Incorporation of inserts, for attaching metal cleats to aid the attachment of the stone veneer, shall be coordinated between the two contractors. \*

1-08.9 LIQUIDATED DAMAGES (FAILURE TO COMPLETE WORK ON TIME)

This section of the Standard Specifications shall be amended to read:

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\* Time for completion of the work as provided by the contract is agreed to have been sufficiently advanced to allow resulting benefit to the Contractor from earlier completion of the work. Time, therefore, shall be of the essence of the contract. Delay in the prosecution of the work may inconvenience the citizens of Seattle and may be expensive to them and to the City.

It may be impossible or extremely difficult to ascertain and determine the actual damages suffered by the City as a result of such delays. However, there usually are definite costs to the City resulting from delay, such as but not limited to, continuing administrative inspection and engineering cost, cost of maintaining the contract as an active item of City business for a longer period of time, delay to the traveling public, loss of benefits to the public through the use of the facility between the time of schedule completion and the actual completion time, prolonged health hazards, interference with and delay of business and commerce, or risks of harm to persons or property of the citizens of Seattle or the City for a longer period of time.

Therefore, the Contractor agrees to pay and authorizes and directs the Owner to deduct any money due or to become due the Contractor the amount set forth herein for each and every calendar day beyond the contract completion date. The Contractor further agrees that any such deduction shall not in any way release the Contractor from further obligation and liabilities in respect to the performance of the entire contract.

The Contractor, by executing this contract, agrees that the amount set forth below is a reasonable estimate of actual damages which would be caused by the failure to complete the work on time and that the amount indicated is for liquidated damages and is not a penalty.

Liquidated damages or other damages for delay will not be assessed against the Contractor for any days for which an extension of time is granted. Further, when the contract work is determined by the Engineer to be completed to the extent that the City has full and unrestricted use and benefit of the facilities constructed by the Contractor, from both an operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains to complete the total contract, the Engineer shall so notify the Contractor in writing that the project is substantially complete. Thereafter, liquidated damages as set forth herein shall not be paid or deducted, but damages for delay will be assessed on the basis of actual engineering expenses, any extra interest on warrants or bonds, and related costs actually incurred and assignable to the project during that calendar period of time.

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The Contractor shall pursue completion of the remaining work with all reasonable diligence and shall furnish a written schedule for final completion of the contract.

Delays to the completion of this Guideway Relocation work will result in delaying construction of the Westlake Center Development. Damages may be incurred by the City due to these delays.

Accordingly the Contractor agrees:

1. To pay liquidated damages of \$2,400.00 per working day for each working day beyond the contract deadline date for completion of of the piers or the vaults, and
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due the Contractor.\*

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2-02.1 DESCRIPTION

Add the following to the end of this section:

\*The Contractor shall remove pavement and soil and shall chip, cut, or break up the existing reinforced concrete foundation of Pier 60 down to elevation 97.0 and remove and dispose of the materials. The Contractor shall backfill and compact the hole and apply "Pavement Patch, Temporary, MC 250" to the backfilled area, in accordance with Section 5-07.3(1)A of these Specifications.\*

2-02.5 PAYMENT

Add the following to the end of this section:

\*The lump sum contract price for "Remove Foundations" shall be full compensation for all labor, materials, tools and equipment required to excavate pavement and soil and to chip, cut or break up the existing reinforced concrete foundation of Pier 60 down to elevation 97.0 feet and to remove and dispose of the materials and to backfill and compact holes left by the removal.\*

6-02.1 DESCRIPTION

Add the following to the end of the section:

\*Piers 60, 61, 62 and 63 will be constructed during this contract to provide support for precast Monorail beams that will be erected on them by the Contract 3 contractor. The contractor shall be aware of the close proximity of the pier shafts to the Westlake Mall foundation wall and Monorail utility vaults as shown in the plans. Conflicts of the shaft locations with temporary tie-backs from the Westlake Mall foundation wall construction exist, and provisions shall be made for tie-back

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removal prior to shaft construction. Construction of the shafts shall not begin until the Westlake Mall permanent foundation walls are constructed and backfilled and tie-backs are removed.\*

\*6-02.3(17)K WORKMANSHIP (New Section)

It should be noted by the Contractor that the precast Monorail beams (Not in Contract) are to be erected end to end on cast-in-place piers to provide a direct riding surface for the pneumatic-tired Monorail train. Shear lugs on the top of the cap beams between the bearings fit into recesses in the bottom of the precast Monorail beams (Not in Contract). Shear bars at the top ends of each beam fit together with the adjacent beam. Hold-down bolts extend through the precast Monorail beams (Not in Contract) and connect into the cast-in-place pier caps. Because of the close tolerances required for the Monorail beam construction, the cast-in-place pier construction including the embedded items in the top of the cap beam must be constructed to closer than normal industry tolerances.

Following is a list of dimension tolerances and dimension requirements that will be used by the Engineer as a guide for acceptance of the pier construction. The Contractor shall make every effort to construct the piers and embedded items to uniform high quality that are within these special dimensional tolerances. Construction not within these tolerances is subject to rejection or correction depending on the effect of the deficiency on the structural adequacy, erection and mating requirements of the Monorail beams and the visual quality of the piers in the completed structure, as determined by the Engineer.

- (a) Top of concrete elevation at pier elevation control point: + 1/8 inch - 1/4 inch.
- (b) Location of pier embedded items: ± 1/4 inch.\*

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\*6-05.3(7) SHAFTS (New Section)

6-05.3(7)A DESCRIPTION

This item of work shall consist of furnishing all materials, labor, tools, equipment, services, and incidentals necessary to construct the shafts in accordance with the plans, the standard specifications, and the special provisions. Shafts shall be constructed one at a time and concreting shall be completed prior to beginning the excavation for the next shaft. Shafts for Piers 62 and 63 shall not be started until vault construction is completed. See Section 1-08.3(5)2.

6-05.3(7)B SHAFT CONSTRUCTION TOLERANCES

Shafts shall be constructed so that the center at the top of the shaft is within 1 inch of the plan location.

Shafts shall be plumb, to within 1.0 percent of the length based on the total length of the shaft. When rock is excavated shafts shall be plumb, to within 2.0 percent of the length based on the total length of the shaft.

The elevation at the top of shaft shall be within  $\pm$  3 inches of the elevation shown in the plans.

During construction of the shafts, the Contractor shall make frequent checks on the plumb, alignment, and dimensions of the shafts. Any deviation exceeding the allowable tolerances shall be corrected immediately.

6-05.3(7)C SUBMITTALS

Before placing the reinforcing steel, the Contractor shall submit shop drawings to the Engineer as specified in Section 1-05.3 of the standard specifications, for the reinforcing cage and for equipment and procedures for constructing the shafts.

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Work shall not proceed until the appropriate submittals have been approved in writing by the Engineer.

6-05.3(7)D CONCRETE

Concrete shall meet all requirements for concrete Class AX as specified in Section 6-02 of the standard specifications, except the Contractor shall use an admixture in accordance with Section 6-02.3(2)B of the standard specifications in order to attain a slump of 7 to 9 inches without affecting the water-cement ratio.

6-05.3(7)E CASING

The casing, when used, shall be of steel and of ample strength to withstand handling stresses and the external pressure of the caving soil and water.

The casing shall be watertight, smooth, and clean.

The inside diameter of the casing shall provide the specified diameter of the shaft.

6-05.3(7)F SHAFT EXCAVATION

Shafts shall be excavated one at a time and to the required depth as shown in the plans or as directed by the Engineer. The excavation shall be completed in a continuous operation using equipment capable of excavating through the type of material expected to be encountered.

If the shaft excavation is stopped, the shaft shall be secured by installation of a safety cover. It shall be the Contractor's responsibility to ensure the safety of the shaft and surrounding soil and the stability of the side walls. A temporary casing should be used if necessary to ensure such safety and stability.

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Where caving-in conditions are encountered, no further excavation will be allowed until the Contractor selects a method to prevent ground movement. The Contractor may elect to place a temporary casing or use other methods approved by the Engineer.

The Contractor shall use appropriate means such as a cleanout bucket, to clean the bottom of the excavation such that no loose or disturbed material is present.

The excavated shaft shall be inspected and approved by the Engineer prior to proceeding with construction. The actual depth of shaft at each location may be modified by the Engineer depending on the soils encountered during shaft excavation.

When unexpected obstructions which require specialized equipment or labor are encountered, the Contractor shall notify the Engineer promptly and the obstructions shall be removed and the excavation continued as directed by the Engineer.

The Contractor is cautioned that a temporary tie-back wall system was used for the construction of the adjacent Westlake Center building. Shaft construction therefore may encounter abandoned tie-backs. It is the Engineer's understanding that these tie-backs have been detensioned. However, prior to removal of any tie-back encountered, the Contractor shall insofar as possible verify that the tie-back encountered was detensioned. If the Contractor cannot verify that the tie-back was detensioned, the Contractor shall consider it as under tension and take appropriate steps to safely remove the tie-back.

If tie-backs are encountered they shall be considered as unexpected obstructions and their removal and payment shall be in accordance with these Special Provisions.

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6-05.3(7)G ASSEMBLY AND PLACEMENT OF REINFORCING STEEL

The reinforcing cage shall be rigidly braced to retain its configuration during handling and when lowered into the shaft, during placement of concrete, and during extraction of the casing from the shaft. No loose bars will be permitted. The reinforcing steel fabricator shall include bracing and any extra reinforcing steel required to fabricate the cage as shown on the shop drawings.

The reinforcement shall be carefully positioned and securely fastened to ensure proper clearance between the cage and the shaft sides or casing, and to ensure that no displacement of the reinforcing steel bars will occur during placement of the concrete.

If the shaft is excavated below the depth indicated in the Plans, Class C concrete shall be placed in accordance with Section 6-05.3(7)H of these Specifications and the reinforcing cage supported on the top of such concrete backfill.

6-05.3(7)H PLACING CONCRETE

Concrete placement shall commence within two hours after completion of the excavation and shall be poured in one continuous operation to the top of the shaft.

If water is not present, the concrete shall be deposited through the center of the reinforcement cage by a method to prevent segregation of aggregates and splashing of concrete on the reinforcement cage. The Contractor's proposed method for depositing concrete shall have approval of the Engineer prior to concrete placement.

If water is present, the concrete shall be deposited in accordance with Section 6-02.3(6)B of the standard specifications.

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If the shaft is excavated below the depth indicated in the Plans, Class C concrete shall be placed in the excavated space to the elevation shown in the Plans as the bottom of the shaft.

#### 6-05.3(7)I CASING REMOVAL

If the casing is withdrawn, a minimum 5-foot head of concrete shall be maintained to balance the soil and water pressure at the bottom of the casing. The casing shall be well oiled with form oil.

If the casing is left in place, void space between the casing and soil shall be pressure-grouted by a method to completely fill all voids. The Contractor's proposed method for grouting void space shall have approval of the Engineer prior to grouting.

The casings for the shafts shall be removed above an elevation 2 feet below the finish ground line.

Mortar-block spacers for reinforcing steel shall not be used when the casing is to be pulled after concrete placement. The Contractor shall provide devices to maintain the location of reinforcing firmly without interfering with casing removal. Such devices shall have the approval of the Engineer prior to installation.\*

#### 6-05.4 MEASUREMENT

Add the following to the end of the section:

\*Measurement for shaft construction will be by the linear foot of shaft completed as shown in the plans or as directed by the Engineer.\*

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6-05.5 PAYMENT

Add the following items to the list of bid items:

\*13. "Shaft (6 foot diameter)" per linear foot.\*

Add the following to the end of the section:

\*The unit contract price for "Shaft-(size)" shall be full payment for furnishing all materials, labor, tools, equipment, and services necessary to construct the shaft as described in accordance with these special provisions, the plans, and the standard specifications.

Removal of unexpected obstructions will be paid for by force account in accordance with Section 1-09.6 of the standard specifications.\*

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SECTION 8-33 - CONDUIT AND TRENCHING

Delete this entire section in its entirety.

8-34 PRE-CAST CONCRETE VAULT (New Section)

8-34.1 DESCRIPTION

This work shall consist of furnishing all materials and labor necessary to assemble and install a pre-cast concrete transformer vault.

8-34.2 MATERIALS

Materials shall be those listed below by Utility Vault Company part numbers, or approved equals:

Riser.....	3042-16
Riser.....	5496-12
Frame & Grate.....	3042-E-HG
Cover, Frame & Grate.....	5496-H10
Top.....	818-T-CL Type II
Riser (2).....	818-30R
Riser.....	818-48R
Base.....	818-SB

8-34.3 CONSTRUCTION REQUIREMENTS

The pre-cast concrete vault shall be installed where noted on the Drawings. Construction shall be in accordance with Seattle City Light (SCL) Construction Standards. Pertinent sections of the SCL Construction Standards are listed below:

No. U2-12.1, Sump Discharge Pipe Installation, Vaults and Manholes.

No. U2-13, Installation of 687 Type Vaults and Larger.

No. U8-7.3, Vault Grounding.

8-34.4 MEASUREMENT

Measurement for "Pre-cast Concrete Vault, (Size)" will be by lump sum.

8-34.5 PAYMENT

Compensation for all costs necessary to complete the work described in Section 8-34 will be made by the lump sum contract price bid for the pay item listed below:

"Pre-cast Concrete Vault, (Size)" lump sum.

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Excavation will be paid for under the bid item "Excavation, Structural".

The unit contract price bid for "Pre-cast Concrete Vault" shall be full compensation for furnishing all labor, materials, tools and equipment necessary to furnish and install the vault described in this section and as shown on the Drawings.

DIVISION 9  
MATERIALS

SECTION 9-34 - ELECTRICAL AND SIGNAL CONDUITS

Delete this entire section in its entirety.

DIVISION 10  
MECHANICAL

10-01 HVAC EXHAUST

10-01.1 DESCRIPTION

This work shall consist of excavation, shoring, foundation preparation, bedding, backfilling, compacting and disposal of surplus material for the construction of the HVAC Exhaust, as shown in the Plans.

All work including excavation, foundation preparation, backfilling and compacting for the construction of the HVAC Exhaust shall meet the general construction requirements of Section 7-17.

10-01.2 MATERIALS

Materials shall meet the requirements of the following sections these Specifications or as specified below:

Reinforced Concrete	9-12.1
Mortar	9-9.12.4
Non-Shrink Grout	6-02.3(2)E
Concrete Masonry Units	9-12.5
Concrete Brick	9-12.6
Clay Brick	9-12.7
Precast Components	9-12.9
Traps	9-12.12
Joints	9-12.9(7)
Pipe	9-30.1C

Concrete Masonry Units or Clay Brick may be used for

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adjustment of the outlet grate to the final elevation.

Joints between precast components or between precast components and reinforced concrete components shall be rubber gaskets.

The outlet grate and frame shall be as shown on the Plans. The outlet screen shall be either: stainless steel wire screen, or PVC coated galvanized steel wire screen. Minimum wire size shall be 0.041 inches. Mesh size shall be 1/2 inch, with a minimum of 80 percent open area. Framing for the outlet screen shall be either stainless steel or galvanized steel of 16 gauge minimum.

### 10-01.3 CONSTRUCTION REQUIREMENTS

Construction shall meet the requirements of the following sections these Specifications or as specified below:

Foundation Preparation	7-05.3(1)
Bedding for Precast Base Section	7-05.3(2)
Bedding for Cast In-Place Section	7-05.3(3)
Precast Base	7-05.3(6)A
Pipe Connections	7-05.3(13)
Backfill	7-05.3(16)

#### 10-01.3(1) OUTLET GRATE GRADE ADJUSTMENT

The Contractor shall initially construct the HVAC Exhaust as shown on the Plans so as to provide adjustment space of not less than 8 inches nor more than 17 inches between the top of the upper bond beam course and the underside of the grate frame to street grade. The grade sheet furnished by the Engineer shows the approximate top grade for the structure plus or minus 0.2 feet, and the final grade will be set by the Engineer. It is the intent that the outlet grate will set flush with the street grade, but shall not be set below the adjacent street surface.

#### 10-01.4 MEASUREMENT

Measurement for the "HVAC Exhaust" will be by the lump sum.

#### 10-01.5 PAYMENT

Compensation for the cost necessary to complete the work described in Section 10-01 will be made at the lump sum contract price bid for "HVAC Exhaust".

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10-02 HVAC EMBEDDED DUCTS

10-02.1 DESCRIPTION

This work shall consist of furnishing installing all materials and labor for the construction of the HVAC embedded ducts as shown on the plans and described in these specifications.

10-02.2 MATERIALS

10-02.2(1) Metal Parts

Metal parts for the HVAC embedded ducts shall be galvanized steel, 16 ga. or heavier and comply with the requirements of the Uniform Mechanical Code Standard No. 4-2, Galvanized Sheet Metals.

10-02.2(2) Concrete

Cement concrete shall be Class B or better, per Section 6-02.3.

10-02.3 CONSTRUCTION REQUIREMENTS

The metal duct shall be constructed in accordance with the Uniform Mechanical Code Standard No. 10-2, Standard for Metal Ducts. Duct joints shall use a transverse joint reinforcement of the types shown in Table 10-2-I of Uniform Mechanical Code Standard No. 10-2, Standard for Metal Ducts, of the appropriate gage material for the gage material used in the duct.

The metal ducts shall have either:

- a. Intermediate reinforcements located sufficiently close together to avoid duct collapse due to the concrete placement pressure, or;
- b. Be provided with temporary internal support(s) to avoid duct collapse due to the concrete placement pressure.

If temporary internal support(s) are used, these supports shall not cause damage to the interior surface of the duct and shall be completely removed after the concrete has hardened.

Spaces between the duct and the blockout in the Westlake Center wall shall be filled with grout or concrete prior to embedding the duct in concrete.

Concrete placement shall be per Section 6-02.3(6).

Excavation and backfilling shall be per Section 2-09.3.

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10-02.4 MEASUREMENT

The HVAC embedded ducts will be measured by each duct.

10-02.5 PAYMENT

Payment for the "HVAC Embedded Duct" will be made at the unit contract prices bid.

The unit contract price shall include all costs for the work required to provide a complete duct installation, including but not limited to excavation, metal duct fabrication, duct placement and attachment, concrete placement and backfill.

10-03 SUMP DISCHARGE PIPE

10-03.1 DESCRIPTION

This work shall consist of furnishing all materials and labor necessary to install embedded sump discharge pipes in and through the walls of the underground equipment vault.

10-03.2 MATERIALS

Materials shall meet the requirements of the following section of these specifications:

Polyvinyl Chloride Pipe and Fittings....9-15.1(2)

10-03.3 CONSTRUCTION REQUIREMENTS

Sump discharge pipes shall be installed as noted on the Drawings. Pipes shall be stubbed through vault walls with a minimum 6 inch extension into vault for later connection to sump pumps. Discharge pipe in HVAC exhaust shall be directed downward a minimum of 12 inches. Install temporary sealing caps on ends of pipe; tape is not acceptable for sealing ends of pipes.

10-03.4 MEASUREMENT

Measurement for "Sump Discharge Pipe, PVC, 2 IN.," will be by the linear foot measured in plan along the alignment of the pipe between the centerlines of 90 degree bends.

10-03.5 PAYMENT

Compensation for the cost necessary to complete the work described in Section 10-03 will be made at the unit contract price bid for the pay item listed below:

- (1) "Sump Discharge Pipe, PVC, 2 IN.," per linear foot.

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This shall include all costs in connection with furnishing and installing the PVC piping, all required fittings, connections and end caps.

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## 11-00 ELECTRICAL - GENERAL

### 11-00.1 Description

This work shall consist of furnishing, installing, testing and placing in satisfactory and successful operation all materials, devices and necessary appurtenances to provide a complete electrical system, together with such other installations hereinafter specified and/or shown on the drawings.

The work shall include all materials, equipment and apparatus not specifically mentioned herein or noted on the drawings, but which are necessary to make a complete working installation of all electrical systems shown on the plans or described herein.

The drawings and specifications are complementary and what is called for in either is binding as if called for in both.

### 11-00.1 (1) Industry Codes and Standards

Perform all work and install all materials and equipment in full accordance with the latest applicable rules, regulations, requirements, and specifications of the following:

- a. Local Laws and Ordinances
- b. State and Federal Laws
- c. National Electrical Code (NEC) 1987 (NFPA-70)
- d. Seattle Electrical Code Supplement
- e. Washington Industrial Safety and Health Act (WISHA)
- f. State Fire Marshal
- g. Underwriters' Laboratory (UL)
- h. National Electric Safety Code (NESC)
- i. American National Standards Institute (ANSI)
- j. National Electrical Manufacturers' Association (NEMA)
- k. Institute of Electrical and Electronics Engineers (IEEE)
- l. Insulated Cable Engineers Association (ICEA)
- m. State of Washington Electrical Workers Safety Rules

n. City of Seattle Dept of Lighting Requirements for Electrical Service Connections

Wherever the requirements of the Specifications or Drawings exceed those of the governing codes and regulations, the requirements of the Specification or Drawings shall govern.

Nothing in these Drawings and Specifications shall be construed to permit work not conforming with governing codes or regulations.

11-00.1 (2) Quality Assurance

11-00.1 (2)A Responsibility

The contractor shall be responsible for:

- a. Complete systems in accordance with the intent of these Contract Documents.
- b. Coordinating the details of facility equipment and construction for all Specification Divisions which affect the work covered under this Division.
- c. Referring to all of the Drawings, Specifications, and approved shop drawings for other trades for details of facility, equipment, and construction which affect the work covered under this Division.
- d. Furnishing and installing all incidental items not specifically shown or specified which are required by good practice to provide the complete systems specified.

11-00.1 (3) As-Constructed Drawings

Upon completion of the work, the contractor shall submit any corrected shop drawings, schematic circuit diagrams, or other drawings necessary for the Engineer to prepare as-built plans to show the work as constructed.

11-00.1 (4) Operation and Maintenance Manuals

Operation and Maintenance Manual (O & M Manual) shall be prepared and submitted as further specified herein.

Manual shall contain shop drawings, operating and maintenance instructions, replacement parts lists, and manufacturer's data for all equipment and components under the project. Each type of device provided shall be identified in the O&M Manual using the same identification as shown on the drawings and specifications. The information included must be for the exact equipment installed, not the complete "line" of the manufacturer. Where sheets show the installed equipment, along with other equipment, the installed equipment shall be neatly and clearly identified on such sheets.

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Parts lists shall give full ordering information assigned by the original parts manufacturer. Relabeled and/or renumbered parts information as reassigned by equipment supplier are not acceptable. The following information shall be provided .

- a. Manufacturer's name, address and phone number.
- b. Local supplier's name, address and phone number.
- c. Complete parts lists including quantities and manufacturer's part numbers.
- d. Installation instructions.
- e. Recommended maintenance items including maintenance procedure and recommended interval of maintenance listed in hours of operation, calendar units or other similar time unit.

The O&M Manual shall be assembled in post binders, National #98-381 or equal. The information contained in the manuals shall be grouped in an orderly arrangement by specification index. The manuals shall have a typewritten index and divider sheets between categories with identifying tabs. The covers shall be imprinted with the name of the job, Owner, Architect, Electrical Engineer, Section 11 Contractor and year of completion. The back edge shall be imprinted with the name of the job, Owner and year of completion.

A preliminary copy of the O & M Manual, 75% complete, shall be submitted for checking and review. Allow 30 days for review. The final copy of the O&M Manual, 100% complete, shall be delivered in triplicate to the Engineer fourteen days prior to the scheduled instruction period.

11-00.1 (5) Instruction Periods

Upon completion of the work and after all tests and final inspection of the work by the Authority(s) having jurisdiction, the Contractor shall demonstrate and instruct the Owner's designated operating and maintenance personnel in the operation and maintenance of the various electrical systems that the Contractor supplied. The Contractor shall arrange scheduled instruction periods with the Owner. The Contractor's representatives shall be superintendents or foremen knowledgeable in each system and supplier's representatives when so specified.

11-00.2 Materials

11-00.2 (1) General

Provide all first-quality, new materials and equipment, free from any defects, in first-class condition, and suitable for the space provided. Provide materials and equipment approved by UL wherever standards have been

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established by that agency.

Where two or more units of the same class of material or equipment are required, provide products of a single manufacturer. Component parts of materials or equipment need not be products of the same manufacturer. Unless otherwise indicated, provide materials and equipment which are the standard products of manufacturers regularly engaged in the production of such materials and equipment. Provide the manufacturers' latest standard design that conforms to these specifications.

Provide materials and equipment with manufacturers' standard finish system, except where otherwise specified.

#### 11-00.2 (2) Hazardous Areas

Provide materials and equipment suitable for installation and acceptable to the regulatory authority having jurisdiction for hazardous locations wherever such locations are shown.

#### 11-00.2 (3) Environmental Conditions

Material and Equipment shall be designed to insure satisfactory operation and operational life in the environmental conditions which will prevail where they are being installed.

#### 11-00.2 (4) Complete System

All the systems mentioned shall be complete and operational in every detail except where specifically noted otherwise. Nothing in these specifications shall be construed as releasing the Contractor from furnishing such additional materials and performing all labor required to provide complete and operable systems.

#### 11-00.3 Construction Requirements

##### 11-00.3 (1) General

Install materials and equipment utilizing craftsman skilled in the particular trade. Provide work which has a neat and finished appearance.

Check the approximate locations of electrical components shown on Drawings for conflicts with openings, structural members, and components of other systems and equipment having fixed locations. In the event of conflicts, consult the Engineer. The Engineer's decision shall govern. Make necessary changes at no cost to Owner.

Follow manufacturers' installation instructions explicitly, unless otherwise indicated. Wherever any conflict arises between manufacturers' instructions, codes and regulations, and these Contract Documents, follow Engineer's direction at no additional cost to Owner. Keep copy of

manufacturers' installation instructions on the jobsite available for review at all times.

**11-00.3 (2) Coordination**

The Section 11 work shall be coordinated with that of the other Sections and trades and all drawings and shall be examined for construction details and necessary coordination. Where insufficient room for proper installation appears, obtain clarification from Engineer before any installation is begun.

**11-00.3 (3) Deviation from Shop Drawings**

Deviation from the Shop Drawings in construction or installation of equipment shall not be made unless Shop Drawings showing proposed deviations are submitted to and approved by the Engineer. No extension of time will be granted as a result of such changes.

**11-00.3 (4) Measurement**

No measurement will be made for items of work in this Section.

**11-00.3 (5) Payment**

No separate payment for ELECTRICAL GENERAL requirements will be made. Work under this Section will be considered as incidental and part of payment for those items defined in Sections 11-01, 11-02, and 11-03.

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## 11-01 ELECTRICAL SITE WORK

### 11-01.1 Description

This work shall consist of furnishing and installing all materials and labor for a complete underground electrical ductbank system as shown on the drawings and these specifications. Provide all concrete and asphalt pavement removal and replacement, trenching, backfill, concrete, steel reinforcement, and conduit required for the underground electrical work indicated by the contract documents and as further specified herein. Specifically contractor shall furnish and install the following:

- a. Underground electrical ductbanks between Seattle City Light Vault No. 278 M-282, Vault A, and the Traction Power Room as shown on the contract drawings.
- b. Underground electrical ductbanks from the traction power and station services rooms to monorail piers as shown on the contract drawings.

#### 11-01.1 (1) Utility Interface

Coordinate with Seattle City Light on interconnection of ducts to their systems. Pay for all utility charges.

#### 11-01.1 (2) Related Work

Section 11-00      Electrical General  
Section 11-02      Raceways  
Section 11-03      Grounding

#### 11-01.1 (3) Submittals

Submit on all materials in accordance with Section 1-05.3.

### 11-01.2 Materials

#### 11-01.2 (1) Rigid Non-Metallic Conduit (PVC)

Where PVC conduit is called out on the contract drawings, it shall be Schedule 40 rigid polyvinyl chloride type unless otherwise noted.

#### 11-01.2 (2) Galvanized Rigid Steel Conduit (GRS)

Where GRS conduit is called out on the contract drawings, it shall be rigid steel, hot dipped galvanized after fabrication inside and out, and shall be UL listed, as manufactured by Republic Steel, Triangle, Allied, Western, National or approved equal. Fittings shall be of galvanized malleable iron or non-corrosive alloy compatible with galvanized conduit. Erickson couplings, and watertight split couplings (O.Z. Gedney type or approved equal) are permitted. Running thread or set screw type fittings are not approved except as noted.

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### 11-01.2 (3) Concrete

Concrete for encasement of cut shall be Class C in accordance with Section 6-02.

### 11-01.2 (4) Spacers

Spacers for duct separation shall be plastic lock-type with 2-inch separation.

### 11-01.2 (5) Pull Cords

Pull Cords shall be polypropylene, 2 ply, Greenlee Tool Company, Cat. No. 431 or equal.

## 11-01.3 Construction Requirements

### 11-01.3 (1) General

Verify space available with equipment sizes and code required working clearances prior to construction. Notify Engineer if sufficient space is not available.

### 11-01.3 (2) Existing Utilities

In addition to Section 1.07.17, the following clearances shall apply.

Encased conduit crossing power and communication ducts, sewer, storm and water mains (including hydrant laterals) shall have a 6" minimum clearance or be cushioned (supported) with styrofoam or cushioning (support) acceptable to the utilities. Encased conduit crossing gas mains shall have a 12" minimum clearance or be cushioned (supported) to the satisfaction of the utility. Minimum vertical clearance from services shall be 3" unless otherwise approved by the owning utilities.

Encased conduit parallel to water and high-pressure gas mains shall have a 60" minimum clearance horizontal to the utility.

Utilities indicated on the contract drawings as abandoned (aban) that fall within the limits of excavations shall be removed and disposed of by the contractor. At time of excavation coordinate with Owner on status of any traffic control conduits (trcd) located within the boundaries of the required excavation.

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### 11-01.3 (3) Trenching

Trench excavation shall conform to the technical requirements of Section 7-17.3(1)A and as further specified herein.

Excavate trench to proper depth and grade. Minimum grade shall be +/-3 inches per 100 feet for drainage terminations. Vertical changes in grade (slope) shall not exceed one foot in 10 feet, except where shown otherwise on the contract drawings.

Trench bottom shall be free of debris and graded smooth. Where trench bottom is rock, or rocky, or contains debris larger than 1", or material with sharp edges, Contractor shall over excavate 3" and fill with 3" of sand.

Removal of existing pavement, sidewalks and curbing shall be in accordance with the technical requirements of Sections 2-02.3.

All trenching in areas of existing concrete or asphalt surfaces shall be performed only after the surface material has been saw cut. Jackhammering shall not be permitted.

### 11-01.3 (4) Ductwork

Duct shall be laid at constant grade and as straight as possible. The rate of change in grade of duct shall not exceed one foot in ten feet unless shown otherwise on the drawings. The Contractor shall not change horizontal or vertical alignment which results in substituting rigid steel conduit for PVC duct in bends unless shown otherwise on the drawings.

For a horizontal or vertical change in direction the conduit shall be cold formed to 20 foot radii at about 68 degrees F provided the deflection does not exceed 15 degrees. For a horizontal or vertical change in direction exceeding 15 degrees, the sweep shall be effected with 4 foot minimum radius galvanized rigid steel conduit and PVC adapter couplings as required.

Spacers for conduit separation shall be plastic lock-type of such configuration to give the required separation between conduit and between conduit and earth as shown on the contract drawings. 3" base spacers shall be used to obtain the 3" spacing under conduit. (Base spacers may also be used to obtain 3" side cover of conduit in bends.) Concrete or wood blocking of 2" nominal thickness and twice the area of the foot of the base spacer shall be provided under base spacers.

Duct shall be joined in a solvent welding process following the printed direction of the manufacturer with a joint tightness meeting the requirements of NEMA TC-6-2.02.

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If the drawings indicate a transition in the configuration of the individual duct of a duct envelope, care must be exercised to be sure that the proper position of the duct is maintained. Distance for transition shall be approved by the Engineer.

Duct shall be perpendicular to walls of vaults or rooms for a distance of 24 inches before entering and shall enter in locations shown on the drawings. Standard end bells of the proper size shall be used for duct terminations, unless noted otherwise on the drawings.

Duct temporarily terminating in the ground at the end of a day's operation shall be cut to length and the end of each duct finished to accept a coupling. A plastic plug shall be installed in each duct. The exposed ends of the duct shall be covered in a satisfactory manner to protect them from damage.

#### 11-01.3 (5) Forms

Concrete may be placed against excavated trench walls without forms except that forms shall be provided in areas of unstable ground, adjacent to handholes or vaults where duct separates to enter handholes or vaults, and adjacent to walls of handholes or vaults to provide separation between such walls and duct by passing handholes or vaults. Bottom forms shall be used as may be necessary.

Duct shall be adequately blocked or restrained to prevent any movement or creep during placement of concrete. On curves and sloping sections, additional blocking and restraint shall be provided during placement of concrete to prevent shifting or displacement of the duct.

#### 11-01.3 (6) Entering Vaults

Where encased duct terminate in existing manholes, openings shall be prepared in the existing wall. Location of openings shall be as shown on the drawings or subject to the direction of the Engineer. The thickness and reinforcing of the walls may vary considerably.

A City Light Safety Watcher shall be present at all times while the Contractor's personnel are working in existing manholes or vaults containing energized equipment. The Contractor shall inform the Engineer 24 hours in advance for such work which requires a City Light Safety Watcher.

The Contractor shall furnish and place covers over or around electrical equipment to minimize dust and debris settling on the equipment.

Removal of concrete knockouts to install duct through vault walls shall be made from outside existing energized manholes and from inside vaults just installed and not energized. Extra care shall be taken to minimize spalling of concrete. Openings in vault walls without knockouts shall be made with a core drill. Use of jack hammers will not be permitted.

Removal of knockout openings shall be incidental to the installation of ductbank as required.

Annular space around entering ducts and ground rods shall be filled with dry pack mortar. Prior to placing mortar, the annular space surfaces shall be painted with a coat of an undiluted polyvinyl acetate bonding agent, such as "Weldcrete", or equal.

### 11-01.3 (7) Concrete Placement

Water shall be removed from the placement areas before placing concrete. Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of the material. Equipment for chuting, pumping and conveying concrete shall be of such size and design as to ensure a continuous flow of concrete at the delivery point without separation of the materials. Coat bonding agent over existing concrete to be joined with new concrete, follow manufacturer's directions.

All duct to be encased shall be encased in a concrete envelope with at least three (3) inches of concrete between the outside of any duct and the surrounding earth and at least two (2) inches of concrete between the outside of any reinforcing steel and the surrounding earth.

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation during the rehandling or flowing. The placement shall be carried on at such a rate that the concrete is at all times plastic and flows readily into the spaces between the ducts. Placing of concrete shall be done in such a manner as to avoid damage to the duct. The fall of concrete into the trench shall be as short as practicable. The flow of concrete shall be diverted away from the trench sides by use of a splash board to avoid dislodging soil and stones.

No concrete that has partially hardened or has been contaminated by foreign materials shall be deposited on the work, nor shall re-tempered concrete be used.

Notify the Engineer at least 24 hours before intended concrete placement. Place no concrete until formwork and embedded items have been inspected by the Engineer.

When concrete placement is once started, it shall be carried on as a continuous operation until the placing of the section is completed. The top surface shall be smoothed and follow the slope of the encased ductbank. Construction joints will be permitted upon approval by the Engineer where it may be necessary for proper completion of the work. Construction joints shall not be located on backfilled earth.

Place the concrete and vibrate, with an approved mechanical vibrator with a head not exceeding one inch in diameter, to eliminate voids. Take care not to puncture, deform or float the conduit. As concrete heat expands the conduit, place concrete encasement from middle of run both ways or from one fixed end only.

Any concrete placed in violation of these provisions may be rejected.

#### 11-01.3 (8) Curing

After the concrete has set, the concrete shall be cured by covering with damp backfill material, except covering may be omitted during inclement weather.

#### 11-01.3 (9) Backfill and Compaction

Place no backfill until Owner has inspected installation.

Backfill and compaction of trenches shall meet the technical requirements of Sections 7.17.3(3), 7-17.3(3)A, and as further specified herein.

Backfill shall not start earlier than the third day following placement of the concrete for duct encasement. The first layer of backfill shall be lightly compacted to prevent damage to the duct bank.

Backfilling trenches for duct banks may start the day following placement of the concrete for duct encasement when the trench is backfilled with saturated washed sandy gravel or sand slurry in 24 to 48 inch layers and compacted with a concrete vibrator or when the duct is encased with high early strength concrete when approved by the Engineer.

Broken pavement, concrete, sod, roots, debris, or any other organic matter shall not be used for backfill.

Backfill shall be placed simultaneously and at the same depths on both sides of duct banks which have been formed on both sides.

#### 11-01.3 (10) Pavement Patching

All existing street pavement which is removed for construction of underground electrical ductbanks shall be patched in accordance with Section 5-07 and Standard Plan Numbers 404a or 404b.

All existing curbs and sidewalks which are removed for construction of underground electrical ductbanks will be restored by others.

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### 11-01.3 (11) Cleaning and Mandreling

All duct shall be mandrel tested and cleaned in the presence of the Engineer, after backfilling, paving and restoration (either temporary or permanent) have been performed. The Contractor may, at his option, mandrel duct prior to or immediately after the duct are encased. Mandrels shall be pulled by hand methods and may be pulled between terminations in either direction.

A mandrel shall be a cylinder made from wood or other similar unyielding material with edges rounded to not more than 1/4 inch radius.

Duct Size	Mandrel Diameter	Mandrel Length	Minimum Brush Diameter	Minimum Brush Length
4	3.50 inches	4.25 inches	4.25 inches	3 inches

A brush with stiff wire bristles at least 1/4 inch larger in diameter than the inside diameter of the duct and with a length at least equal to the I.D. of the duct and a swab consisting of clean rags, shall be drawn through the duct to make certain no particles of foreign material are left in the duct. The cleaning and mandreling operations may be performed simultaneously. Each duct shall be plugged at both ends with plastic plugs immediately after being cleaned.

Any defect discovered shall be immediately corrected by determining the locations of the defect and exposing and correcting the defect to the satisfaction of the Engineer. No payment for a section of encased duct between terminations will be made until all duct in that section are clear and the mandrel passes freely through them.

### 11-01.3 (12) Pull Cords

After testing and cleaning, all conduits shall have pull cords installed. The pull cords shall be firmly secured at each end of the conduit.

### 11-01.4 Measurement

Measurement for concrete encasement shall be by the cubic yard of concrete placed.

Measurement for conduit shall be by the linear foot,

Measurement for trench excavation, backfill and compaction shall be included in conduit costs.

Measurement for pavement patching shall be as based on actual measured dimensions with the provision that maximum pay width shall be limited to that shown on Standard Plan 404a/b.

Measurement for pavement sawcutting shall be by the linear foot of cut length.

#### 11-01.5 Payment

Payment for the work in this section will be made at unit contract prices bid only for the pay items listed or referenced below:

- (1) "Concrete," per cubic yard.
- (2) "2 Inch Conduit," per linear foot.
- (3) "4 Inch Conduit," per linear foot.
- (4) "Pavement Sawcutting" per linear foot.
- (5) "Pavement Patching" per square foot.

The unit contract price for "Concrete" shall include all costs for the work required to provide a complete installation, including but not limited to formwork installation and removal.

The unit contract price for "2 Inch Conduit" and "4 Inch Conduit" shall include all costs for the work required to provide a complete installation, including but not limited to ductbank forming, conduit spacers, supports, ties, vault entry, termination to conduits in piers 62 and 63, traction power room entry, station service room entry, trench excavation, trench backfill and compaction, conduit termination, cleaning, mandreling, and installation of pull cords.

There will be no separate payment for trench excavation, backfill and compaction, extra excavation or imported backfill materials.

The unit contract price for "pavement patching" of the type required shall be limited to the maximum pay width as shown on Standard Plan 404a/b or the City's Open and Restoration Policy, and shall include the costs for all work described in Section 5-07, and not otherwise provided for in this pay section, necessary to permanently restore, as applicable, pavements or other traffic bearing surfaces which have been opened by trench excavation or similar work. All incidental work required to complete the patching of street surfaces as specified, including installing joints where required, shall be considered incidental to the patching, and the costs thereof shall be included in the items for which payment is provided.

The unit contract price for "Pavement Sawcutting" shall include all costs for the work required to saw concrete or asphalt, only at the location indicated on the drawings or designated by the Engineer. No payment will be made for sawcutting concrete or asphalt which is done at the option of the contractor.

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## 11-02 ELECTRICAL RACEWAYS

### 11-02.1 Description

This work shall consist of furnishing and installing all materials and labor for a complete electrical conduit system as shown on the contract documents as as further specified herein. Specifically contractor shall furnish and install:

- a. Embedded conduit systems in the monorail guideway piers as shown on the contract drawings, including connection to underground ductbanks installed under Section 11-01.

### 11-02.1 (1) Related Work

Section 11-00 Electrical General  
Section 11-01 Electrical Site Work  
Section 11-03 Grounding

### 11-02.1 (2) Quality Assurance

All raceway and fittings shall be the end products of one supplier and shall be UL listed and labeled.

All raceway and fittings shall be delivered and stored with protective end caps to prevent the entrance of foreign materials prior to installation.

### 11-02.1 (3) Submittals

Submit all information in accordance with Section 1-05.3.

### 11-02.2 Materials

#### 11-02.2 (1) Galvanized Rigid Steel Conduit (GRS)

Where shown on the contract drawings conduit shall be rigid steel, hot dipped galvanized after fabrication inside and out, and shall be UL listed, as manufactured by Republic Steel, Triangle, Allied, Western, National or approved equal. Fittings shall be of galvanized malleable iron or non-corrosive alloy compatible with galvanized conduit. Erickson couplings, and watertight split couplings (O.Z. type or equivalent) are permitted. Running thread or set screw type fittings are not approved except as noted.

#### 11-02.2 (2) Rigid Non-Metallic Conduit (PVC)

Where shown on the drawings, conduit shall be Schedule 40 rigid polyvinyl chloride type shall be used unless otherwise noted. Rigid aluminum conduit shall not be used.

### 11-02.2 (3) Pullcords

Pull cords shall be polypropylene, 2 ply, Greenlee Tool Company, Cat. No. 431 or equal.

### 11-02.3 Construction Requirements

#### 11-02.3 (1) General

All raceways will be Schedule 40 PVC, or Galvanized Rigid Steel (GRS) as shown on the drawings.

When galvanized rigid steel conduit (GRS) is cut, the ends shall be made square and true with conventional pipe cutting equipment. Conduit shall be threaded with a standard conduit cutting die. Burrs and sharp corners at the end of each conduit shall be removed with a tapered reamer. Threads shall be cleaned of all metal, lubricants and red lead. Conduit shall be joined by the use of rigid steel conduit couplings. Slip joints or field cut running threads will not be permitted for coupling conduit. When a standard coupling cannot be used, a threaded union coupling shall be used upon approval of the Engineer. Conduit threads shall be coated with a conduit thread compound designed to ease assembly and disassembly, and to improve electrical conductivity. The compound shall be Appleton Company Type TLC-3 or approved equal. Conduit shall be tightened securely to prevent the entrance of moisture, concrete or other foreign material, and to provide a good electrical connection throughout the entire length of the conduit run. The method of tightening shall not damage the conduit or coupling. Where the coating on the conduit or the coupling has been damaged, it shall be thoroughly painted with galvanizing repair paint Federal Spec. MIL-P-21035 per the manufacturer's recommendations.

All bushings shall be of the insulated throat type. The entire conduit system shall be properly bonded and grounded in accordance with N.E.C.

PVC conduit shall be assembled with solvent welded joints in accordance with the manufacturer's written instructions. Bends and fittings shall be factory-produced when available.

Provide and install manufactured end caps or plugs on all raceway ends during construction to prevent the entrance of water or dirt. Tape, as a cover, is not permitted.

All elbows for raceways shall be factory elbows, minimum bending radii shall be 12 inches for 2" conduits and 24 inches for 4" conduits

Raceways shall not penetrate sheet metal ducts unless permission is granted by the Engineer in writing. All sleeves shall be provided for raceway installation under this section.

Route raceways to avoid structural obstructions and to minimize crossovers.

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Install UL approved expansion fittings complete with grounding jumpers where raceways cross slab expansion joints, construction joints, or sawn joints.

Clean all raceways after completion of installation.

Nylon pull cord shall be installed in all installed raceways.

#### 11-02.3 (2) Inserts, Blockouts and Sleeves

Furnish and set in place, in advance of pouring slabs and walls, all inserts, sleeves and electrical blockouts shown on the contract drawings.

Sleeves thru the Westlake Mall will be provided by others. These sleeves shall be continued thru the west wall of the electrical vaults by the contractor, and terminated flush with the inside surface of the vault walls.

#### 11-02.3 (3) Sealing of Raceway Penetrations

##### 11-02.3 (3)A Exterior Surfaces Above Grade

Seal around all penetrations with caulking approved by the Engineer. For concrete construction above ground level, cast raceway in wall or core drill wall and hand pack with a mixture of equal parts of sand and cement.

##### 11-02.3 (3)B Exterior Surfaces Below Grade

Cast raceway into wall (or floor) or use manufactured seal assembly (such as O.Z. type "FSK", or equal) cast in place.

##### 11-02.3 (3)C Fire-Rated Floors, Walls, Ceilings/Roofs

Where raceways penetrate through fire-rated floors, walls or ceilings/roofs, a fire-stop material shall be installed to preserve the fire rating. The fire-stop material shall be UL listed for the required time rating and shall be a 3M Penetration Sealing System 7900 Series or approved equal. Installation shall be according to manufacturer's recommendations and shall meet all requirements of the Seattle Fire Department.

#### 11-02.3 (4) Raceway Supports

Raceways, whether exposed or concealed, shall be securely supported and fastened at intervals in accordance with the NEC, and within 18 inches of each outlet, ell, fitting, panel, etc., or as shown on the drawings.

When more than two raceways will use the same routing, group together on a patented channel support system (such as Unistrut, or equal).

**11-02.4 Measurement**

Measurement for payment for the work in this section will be lump sum.

**11-02.5 Payment**

Payment for the work in this section will be made at the bid lump sum price for "Electrical Raceways".

The lump sum price shall be full compensation for all costs incurred in the furnishing, installing and checking the electrical conduit, conduit fittings, and conduit accessories, as specified in this section, for both above ground and underground installation and all other incidentals to complete the work of this section.

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## 11-03 GROUNDING

### 11-03.1 Description

This section covers furnishing and installing all materials necessary to provide a complete grounding system in accordance with the drawings and these specifications. The grounding system shall consist of the traction power substation ground grid, Vault 'A' ground rods, ground test stations, exposed grounding pigtail stubups, and all other buried or embedded components as shown on the contract drawings and specified herein.

#### 11-03.1 (1) Related Work

Section 11-00	Electrical General
Section 11-01	Electrical Site Work
Section 11-02	Electrical Raceways

#### 11-03.1 (2) Quality Assurance

All grounding material shall be new, shall be UL listed and labeled, and shall be the end product of one supplier.

#### 11-03.1 (3) Submittals

Submit on materials in accordance with Section 1-05.3.

#### 11-03.1 (4) Codes and Standards

Sponsor	Number	Subject
IEEE	Standard 80	Guide for Safety in Substation Grounding

### 11-03.2 Materials

#### 11-03.2 (1) Grounding Conductors

Grounding conductors shall be copper, bare, soft drawn copper, 4/0 AWG unless otherwise indicated on the Contract Drawings.

#### 11-03.2 (2) Ground Rods

Ground rods shall be fabricated from cold-finished carbon steel shafting in accordance with ASTM Designation A 108 as it applies to Grade 1018. Galvanized ground rods shall not be used.

Grounding  
11-03-1

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The covering of the steel core shall be a sheath of electrolytic-grade copper having a minimum thickness of 0.010 inches. The rods shall have rolled threads at each end for joining together with couplings. Rods shall be 10 feet in length and 3/4 inch diameter.

Couplings for sectional rods shall be made of high-strength, corrosion-resistant bronze, internally threaded to fit standard rods.

Driving studs shall be made of high-strength, hardened steel of SAE 1045 or equal quality.

#### 11-03.2 (3) Connectors, Below ground

Below ground connectors shall be thermite welded type, capable of welding 4/0 to 4/0 AWG copper conductors and 4/0 AWG copper to 3/4" ground rods. Reference "Cadweld Process", "Thermoweld Process", or equal.

#### 11-03.2 (4) Connectors, Above Ground

Connectors shall be thermite welded type, capable of welding 4/0 AWG copper conductor to structural steel or copper bus.

Bolt-on lugs shall be two-hole off-set type, tin-plated copper, NEMA rating equivalent to 4/0 AWG copper conductor, designed to withstand a 4/0 AWG connection.

#### 11-03.2 (5) Cable Supports

Fasteners or cable supports shall be galvanized steel or bronze, sized to accommodate and secure 4/0 AWG conductor without the conductor slipping after installation.

#### 11-03.2 (6) Grounding Buses (Test Stations)

Grounding buses (Test Stations) shall be 98 per cent conductivity, tinned copper, sized and located as shown on the drawings, and shall be drilled and tapped to accept machine bolts sized according to the wire sizes being terminated.

#### 11-03.2 (7) Ground Plates

Ground plates shall be Burndy #YGF29-2N or equal.

### 11-03.2 (8) Resurfacing Material

Resurfacing Material for galvanizing shall be low temperature self-fluxing type.

### 11-03.3 Construction Requirements

#### 11-03.3 (1) General

All grounding materials shall be installed as indicated on the drawings and in accordance with applicable codes.

#### 11-03.3 (2) Below Ground Installation

Grounding grid conductor shall be installed in the ground at the locations and to the depth shown on the Contract Drawings. At cable crossings, care shall be exercised so that existing cable or crossed-over cable is not damaged. Damaged cable shall be replaced with new cable. After installation, the backfilled material shall be compacted to its original density.

All intersections of cable shall be connected together as indicated on the contract drawings. All taps and ground rods shall be connected with separate connectors to the main ground grid. All connectors shall be thermite welded type.

Connectors shall be thermite welded types and shall be installed in accordance with the manufacturer's recommendations. All dirt shall be removed from the splice area of the conductor just prior to making the connection. Each connection shall be inspected and approved by the Engineer prior to being backfilled.

Ground rods shall be driven vertically full-length into the ground and connected to the underground conductor. If ground rods at Vault A cannot be driven at least 6 feet into the earth, contractor shall install sufficient length of #2AWG SDBC and connect to ground grid at traction power substation vault. Contact Engineer should refusal occur with less than 6 feet of driven length for ground rods in substation ground grid.

Connection to reinforcing bar shall be as shown on the Contract Drawings.

After conductors have been installed, the excavation shall be backfilled and compacted to achieve the 95% density per Section 11.01.

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**11-03.3 (3) Above Ground Installation**

**11-03.3 (3)A Conductor Routing**

Conductors to test stations shall be neatly trained up along the face of the concrete surface following all surfaces closely to the point of connection. Conductor shall be supported and secured with cable fasteners at intervals not to exceed five feet. In all cases where connections to the ground grid are stubbed out for future equipment installation, the Contractor shall leave adequate additional length of conductor to be coiled for later connection.

**11-03.3 (4) Bar Lugs**

Connections of ground conductor to test stations shall be made with bolt-on bar lugs. All bolts or fastening devices on the test station shall be fabricated from tinned-bronze and secured with lockwashers or equivalent type locking method.

**11-03.3 (5) Tests**

Upon completion of installation of electrical grounding system, the ohmic value of the "system ground" shall be measured with respect to earth ground. A ground mat testing instrument such as a James G. Biddle and Co. Model 250260 meggar or equal shall be used. All tests shall be performed in the presence of the Engineer. Notify the Engineer 48 hours prior to testing. Maximum resistance to ground shall not exceed five ohms.

**11-03.4 Measurement**

Measurement for the work described in this section will be lump sum.

**11-03.5 Payment**

Payment for substation grounding will be made at the bid lump sum price for "Grounding". Payment shall be full compensation for all costs incurred in providing a grounding system including all incidentals necessary to complete the work of this section.

**DIVISION 12  
ARCHITECTURAL**

12-01 Limestone Veneer

12-01.1 Description:

This work consists of furnishing and installing a limestone veneer to the lower portion of the column shafts for piers 60, 61, 62, 63, and 64 of the Seattle Monorail guideway, as shown on the plans, sheets A-2 through A-6. The work shall include all labor, materials, and incidentals necessary for complete installation, including all necessary mounting channels, hardware, sealants, grout, and miscellaneous accessory items.

12-01.2 Materials:

Limestone veneer shall be one-inch thick Comblanchien, a French limestone, from the Rocamat Quarry in Puteaux, France. Finish shall be smooth polished or flame finished as indicated on the plans. Edges shall be square and polished, unless otherwise indicated on the plans.

Attachment of the limestone veneer shall consist of continuous stainless steel channels in a 3/4-inch airspace between the veneer and the face of the concrete pier. The space between concrete and stone shall be filled with grout after installation of the stone. All metal parts shall be stainless steel, including channels, bolts, screws, studs, and tie wires. Exact means of attachment shall be designed by the fabricator and shall be fully detailed in complete shop drawings, to be submitted for review and approval by the Engineer.

Grout shall be Fine Grout in accordance with ASTM C476, using size 1 aggregate in accordance with ASTM C404 and shall be placed with a slump of 8 to 10 inches, or as approved. Use minimum amount of water for hydration and workability; plasticizing additives may be used if approved prior to start of work.

Field sealants: G.E. Silpruf, Dow-Corning 790, or approved silicone sealant. Other type sealants may be considered provided samples and all necessary data sheets are submitted and subject to approval by Architect. Polybutane, oleoresinous, asphaltic, and other oil base sealants are not acceptable for field use. Color as selected by Architect.

Sealant back-up: Polyethylene foam, sponge neoprene conforming with ASTM C509, or urethane foam as recommended by sealant manufacturer.

Any reference in these specifications to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The contractor may, at his option, propose substitutions for approval by the Engineer, in accordance with the contract provisions.

Hardware not specifically called out but required to complete the work as shown and specified shall be considered incidental to the contract and shall be furnished and installed by the contractor at no additional cost to the city.

**12-01.3 Construction Requirements:**

Limestone veneer shall be installed precisely as dimensioned and detailed within a tolerance of  $\pm 1/16$ -inch. Submit complete shop drawings showing all panels fully dimensioned, with finishes and edge details indicated.

Stone shall be installed on approved mounting devices as shown on drawings and as approved. Joints shall be closely and tightly fitted.

All joints between sections of stone, and between stone and adjoining materials, shall be sealed to preclude entry of water. Sealants shall be silicone or polyurethane materials guaranteed not to cause staining of stone and custom colored to match stone as approved. Sealants shall be applied continuously between surfaces of limestone, or limestone and concrete and tooled flush so as to be practically visible on the exterior of the completed veneer.

All voids between the limestone veneer and the concrete pier shall be completely filled with grout.

**12-01.4 Measurement:**

The limestone veneer will not be measured, but will be paid for on a lump sum basis, as described in Section 12-01.5.

**12-01.5 Payment:**

Compensation for the cost necessary to complete the work described in Section 12-01 will be made at the unit contract prices bid only for the pay items listed or referenced below:

1) Limestone Veneer

Payment for "limestone veneer" shall be full compensation for all costs in connection with furnishing all materials, labor, tools, and equipment necessary for the furnishing and installation of the limestone veneer including support and attachment devices, hardware, grouts and sealants as shown on the plans and as specified herein.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

12-02 STAIR RAILINGS

12-02.1 DESCRIPTION

This work consists of providing and installing railings along the stairs as shown on the plans. These railings are intended to provide protection equal to the requirements of the 1982 Uniform Building Code and the Seattle Building Code Supplement, Section 2308 and table 23-B.

12-02.2 MATERIALS

The railings shall be aluminum pipe as manufactured by Julius Blum & Co. Inc. or approved equal. The material, design and attachments of the aluminum railing shall be approved by the Engineer. Hardware not specifically called out but required to complete the work as specified shall be considered incidental to the contract and shall be furnished and installed by the Contractor at no additional cost to the City.

Standard, factory manufactured railing systems are preferred to custom fabricated railing systems. Shop drawings and calculations demonstrating that the railings meet the 1982 Uniform Building Code and the Seattle Supplement, Section 2308 and table 23-B structural requirements shall be submitted.

12-02.3 CONSTRUCTION REQUIREMENTS

The Contractor shall construct, and install the railings in accordance with the details shown in the Plans.

All edges, corners, welds, joints, etc. shall be smooth and free of sharp projections, edges or burrs. Provisions shall be made to accommodate thermal expansion and contraction of the railings.

The bolted connection shall be approved by the Engineer. The connection between aluminum posts and the wall/floor shall be protected from dissimilar materials corrosion with a coating of asphaltic paint between the contact surfaces.

Aluminum railings shall have a clear satin anodized, 0.7 mil thick finish. The railings shall be factory finished.

12-02.4 MEASUREMENT

Stair railings will not be measured but will be paid for on a lump sum basis as described in Section 12-02.5.

12-02.5 PAYMENT

Payment will be made for the following bid item as is included in the proposal, and payment will be made under:  
"Stair Railings", lump sum.

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The lump sum contract price for "Stair Railings" shall be full compensation for all costs in connection with furnishing all materials, labor, tools and equipment necessary for the furnishing and installation of stair railings of the types shown in the plans and as outlined herein.

12-03 METAL DOORS, FRAMES AND HARDWARE

12-03.1 DESCRIPTION

This work shall consist of furnishing and installing hollow metal doors, metal frames and all required finish hardware and related specialty items in the locations shown on the Plans as required by these specifications.

12-03.1(1) GENERAL

Three hour U.L. rated hollow metal doors and frames shall be manufactured by Curries Mfg. Inc. or an approved equal. Hardware shall be provided in accordance with the requirements of this Section, except that minor variations due to differences in manufacturer's standards will be permitted if approved by the Engineer.

12-03.1(2) INDUSTRY CODES AND STANDARDS

Work performed and materials furnished shall conform to the following publications to the extent specified herein. Pertinent sections are indicated. The latest edition or supplement shall be considered to be the issue in effect.

American National Standards Institute (ANSI)

A115.1 Preparation of Doors and Frames for Bolts,  
Thru Closures, Latches, Locks, Pivots and Strikes  
A115.17

A156.1 Butts and Hinges

A156.2 Locks & Lock Trim

A156.4 Door Controls - Closures

A156.7 Template Hinge Dimensions

A156.16 Auxiliary Hardware

American Society for Testing and Materials (ASTM)

C236 Thermal Conductance and Transmittance of Built-Up  
Sections by Means of the Guarded Hot Box

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Federal Specifications (FS)

RR-D-575 Door, Metal, Sliding and Swinging; Door Frame,  
Metal (Flush and Semiflush)

(The) Door Hardware Institute (DHI)

Hardware Reinforcements on Steel Doors and Frames

National Fire Protection Agency (NFPA)

NFPA 80-80 Standard for Fire Doors and Windows  
(ANSI 2.7-73)

NFPA 252 Standard Methods of Fire Tests of Door  
Assemblies

Steel Door Institute (SDI)

107 Standard Steel Doors And Frames

Underwriters Laboratory, Inc.

UL63 Safety Standards for Fire Doors and Frames  
(ANSI 155.1-70)

UL10 Fire Test of Door Assemblies

12-03.1(3) SHOP DRAWINGS AND SUBMITTALS

Shop drawings and catalog data shall be submitted showing details of door, frame and hardware preparation for each opening. Certificates of compliance attesting that the hardware items conform to the ANSI and Underwriters Laboratory standards under which the items are specified shall be submitted.

12-03.1(4) HARDWARE SCHEDULE

Hardware schedule shall list all of the materials to be furnished and shall be submitted for approval. The schedule shall include for each item ; the quantities, manufacturers' catalog numbers, hinge and door closer sizes, detail information and location and hardware set identification, corresponding ANSI or BHMA standard function number, manufacturer's catalog number and list of abbreviations and a template number. All doors in this contract shall be furnished by the same manufacturer.

12-03.1(5) KEYING SCHEDULE

Keying schedule shall be submitted for approval and shall be developed in accordance with the Door Hardware Institute publication Keying - Procedures, Systems and Nomenclature.

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12-03.2 MATERIALS

Doors and frames shall be in accordance with Fed. Spec. RR-D-575, Type II, of class and style indicated on the drawings, 1-3/4 inch thick, unless otherwise indicated. All hardware shall conform to ANSI or BHMA standards unless otherwise indicated.

12-03.2(1) MATERIALS, FABRICATION AND SOURCE QUALITY CONTROL

Materials, fabrication and quality shall be in accordance with Fed. Spec. RR-D-575 as modified herein.

12-03.2(2) REINFORCEMENT AND PREPARATION

In addition to the other requirements specified herein, reinforce and prepare doors and frames for all required hardware.

12-03.2(3) DOORS

12-03.2(3)A FABRICATION

12-03.2(3)A1 CONSTRUCTION

Furnished doors shall be of the same appearance on both sides. Thickness of the door shall be 16 gage steel minimum.

12-03.2(3)A2 REINFORCEMENT AND PREPARATION

Provide door reinforcement and preparation for hardware in accordance with SDI-107 and ANSI A115.1. Reinforce doors on both faces for closures.

12-03.2(3)A3 INTERNAL CONSTRUCTION

The door face panel shall be reinforced with steel members. All spaces between reinforcing members shall be filled with insulation.

12-03.2(3)A4 BONDERIZE, PRIME AND PAINT

Doors shall be bonderized, primed with a baked-on rust-inhibitive primer and painted. Paint color to be selected by the Engineer.

12-03.2(4) FRAMES

12-03.2(4)A FABRICATION

12-03.2(4)A1 CONSTRUCTION

Construct door frames of 16 gage steel with mitered corners

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and face seams. Continuously weld frames for all doors. Exposed faces of frames shall be not less than 2 inches.

12-03.2(4)A2 FABRICATION

Fabricate frames to fit, matching doors and form integral stops and rabbets, as indicated on the drawings.

12-03.2(4)A3 REINFORCEMENT AND PREPARATION

Provide door frame reinforcement and preparation for hardware in accordance with SDI-107 and ANSI A15.1. Provide frames with closures reinforcing on both faces; masonry anchors and throat as indicated on the drawings; hinge backsets and reinforcing; corner reinforcements; surface hardware preparation; strike reinforcement and preparation; and rubber silencers.

12-03.2(4)A4 ANCHORS

Set frames into formwork, fully braced, secured and plumb. Set and secure not less than three U.L. rated masonry anchors per jamb.

12-03.2(4)A5 BONDERIZE, PRIME AND PAINT

Frames to match doors.

12-03.2(5) HARDWARE

12-03.2(5)A HARDWARE SETS

Each door shall have identical hardware set consisting of: 1-1/2 pair of hinges, 1 - cylindrical latchset, 1 - closure and 1 - door stop. All hardware items shall be qualified for application to a three hour door. Fit each door with principal items of hardware listed, plus other hardware accessories as required for proper operation and appearance. Unless otherwise specified, hardware shall be furnished for each function or operation by the same manufacturer. Where practical applications cannot be made with the type of hardware specified, furnish suitable types having the same operative and functional features and code requirements, subject to approval of the Engineer.

12-03.2(5)B LOCKS AND LATCHSETS

Lock and latchsets shall be the product of a single manufacturer. All locks shall be key locked from the hallway side and be lockable and unlockable from inside by manipulation of a mechanism such as a button. From the inside the locks shall always be free (unlocked).

The lock in all cylinders shall be manufactured by BEST with

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no substitutions allowed. Cylinders shall have six pins with paracentric keyway. Cylinders shall have a key mechanism with an interchangeable core which can be readily removed, replaced or exchanged by a single control key. Locks shall be installed so that when the key is inserted into the knob, the cuts on the key will face upward.

12-03.2(5)C HINGES

Hinges shall conform to ANSI A156.1. Hinges used on metal doors and frames shall also conform to ANSI A156.7. Hinge sizes shall conform to the hinge manufacturer's published recommendations.

12-03.2(5)D SURFACE TYPE CLOSURES

Surface type closures shall conform to ANSI A156.4 and be U.L. rated. Size requirements shall conform to the manufacturers published recommendations and shall be shown on the hardware schedule. Closure shall be top jamb mounted with a parallel arm and shall have no hold-open feature.

12-03.2(5)E FINISHES

All aluminum shall be anodized. All door hardware shall have a US26D finish.

12-03.2(5)F KEYING

Keying shall be such that each door shall have an individual key and that there will be a master key for all three doors. Cylinder locks shall be keyed by the Contractor.

12-03.3 CONSTRUCTION REQUIREMENTS

12-03.3(1) PRODUCT HANDLING

Doors and frames shall be packed and shipped as complete assemblies, including hardware installed at the factory.

Doors and frames shall be stored under cover at the site on wood sills or on the floor in a manner that will prevent corrosion or other damage. Vent plastic or canvas shelters.

Hardware shall be delivered to the project site in the manufacturer's original packages. Each article of hardware shall be individually packaged in the manufacturer's standard commercial carton or container, properly marked or labeled so as to be readily identified with the approved hardware schedule. Each change-key shall be tagged or otherwise identified with the door for which its cylinder is intended.

12-03.3(2) CONDITIONS OF SURFACES

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All surfaces shall be inspected to ensure the surfaces are in such condition that the frames and doors will be installed accurately, in true alignment.

#### 12-03.3(3)           INSTALLATION

Install frames plumb, rigid and in true alignment and fasten frames so as to retain their position during construction of concrete walls.

Hardware shall be installed on the doors in accordance with the requirements of this Section and DHI publication, Recommended Locations for Builders' Hardware for Standard Steel Doors and Frames. When approved, slight variations in locations or dimensions will be permitted. Application shall be in accordance with DHI publication, The Installation of Commercial Steel Doors and Frames.

Door-closing devices shall be installed and adjusted in accordance with the templates and printed instructions supplied by the manufacturer of the devices. Insofar as practical, doors opening to the hall shall have closures mounted on the room side of the door. Door closures shall be installed with thru bolts. No hold-open feature to be provided.

Touch up abraded, damaged prime surfaces using the same prime paint as used in the shop.

Adjust all hardware during installation to insure free and proper operation without binding.

#### 12-03.4               MEASUREMENT

Doors, frames and hardware will be measured by the unit for each door and frame furnished complete with all hardware and in the locations shown on the drawings.

#### 12-03.5               PAYMENT

Payment will be made for each of the following bid items as are included in the bid form:

"Door and Frame," per each

The unit price of the above item, shall be full compensation for furnishing all labor, materials, tools and equipment necessary to furnish and install the doors and frames including locks, keys, latchsets, hinges, closures, and finish paint in locations shown on the drawings.

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12-04 MEMBRANE ROOFING

12-04.1 DESCRIPTION

This work shall consist of furnishing all labor and materials necessary to install the described roofing system over the vault and access hatch, including all flashing and connections as detailed on the drawings.

12-04.2 MATERIALS

All roofing products shall be by Carlisle SynTec Systems or an approved equal.

The membrane shall be a 0.060 inch thick EPDM membrane.

The flashing shall be a 0.060 inch thick uncured EPDM.

The bonding adhesive, splicing cement, splice wash, lap seal, and water cut-off mastic shall be as recommended by the membrane manufacturer.

The protection board by W. R. Meadows PC-2, ore approved equal.

12-04.3 CONSTRUCTION REQUIREMENTS

The Contractor shall be responsible for providing proper substrate to receive the EPDM waterproofing system. The application of the EPDM shall be according to the manufacturers instructions.

12-04.4 MEASUREMENT

The roofing system will not be measured but be paid for on a lump sum basis as described below.

12-04.5 PAYMENT

Payment will be made for the following bid item as included in the proposal and payment will be made under:

"Membrane Roofing" Lump sum

The lump sum price for "Membrane Roofing" shall be full compensation for all costs in connection with furnishing all materials, labor, tools and equipment necessary for the installation of the Roofing system as described herein and shown on the drawings.

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12-05 SIGNAGE

12-05.1 DESCRIPTION

This work shall consist of furnishing and installing signage on the doors of the vault in conference with applicable codes and as deemed necessary for the public's safety. Signs shall be placed at the locations shown on the drawings. All doors shall have similar signs the only difference shall be the room name. The heading shall be in bold type - "ENTRY BY AUTHORIZED PERSONNEL ONLY" following this shall be the room name. Starting with the northernmost room they shall be - "EQUIPMENT ROOM", "ATP ROOM" and "TRAC. PWR. ROOM".

12-05.2 MATERIALS

Signing materials and mounting system shall be similar to signage used in other locations of Westlake Center for electrical rooms.

12-05.3 CONSTRUCTION REQUIREMENTS

Signs shall be placed in the locations shown on the drawings in a conspicuous positions such that they can be easily read. Signs shall be mounted where practical by tamper-resistant attachments.

12-05.4 MEASUREMENT

The signs will not be measured but will be paid for on a lump sum basis.

12-05.5 PAYMENT

Payment will be made for the following bid items as are included in the proposal and payment will be made under:

"Signage," lump sum

The lump sum price for "Signage" shall be full compensation for all costs in connection with furnishing all materials labor necessary for the installation of signs as shown in the plans and as outlined herein.

12-06 SEALER

12-06.1 DESCRIPTION

This work shall consist of applying a sealer to the concrete floor of the vault rooms.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

12-06.2 MATERIALS

The sealer shall be one of the following products:

Sherman Williams, KEM Cati-coat Epoxy Sealer

Dural, 330 Epoxy Penetrating Sealer

Vitricon, VIPOxy 310 Sealer

12-06.3 CONSTRUCTION REQUIREMENTS

The application of the selected product listed above shall be according to the manufacturers recommendations.

12-06.4 MEASUREMENTS

The floor sealer will not be measured but will be paid for on a lump sum basis.

12-06.5 PAYMENT

Payment will be made for the following bid items as are included in the proposal and payment will be made under:

"Floor Sealer," lump sum

The lump sum price for "Floor Sealer" shall be full compensation for all costs in connection with furnishing all materials, labor, tools and equipment necessary for the installation of the sealer as noted on the drawings.

12-07 WATERPROOFING

12-07.1 GENERAL

12-07.1(1) CODES

The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

American Society for Testing and Materials (ASTM)  
Publication:

ASTM D217-68 (R 1978)	Test for Cone Penetration of Lubricating Grease
--------------------------	--

12-07.1(2) SUBMITTALS

Certificates: Certificates attesting that the materials meet the requirements specified shall be submitted for approval prior to delivery of materials to the site.

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Specifications: Submit manufacture's specifications for surface preparation, the condition of surfaces for treatment, and the application and treatment of joints and openings for approval before starting work.

12-07.1(3) DELIVERY, STORAGE AND HANDLING

Do not place bentonite in panel or loose form in flooded areas. Protect bentonite material continuously as recommended by the manufacturer. Bentonite panels and containers shall have the manufacture's label and identification as to type of material. Storage and handling of waterproofing material shall be in accordance with recommendations of the manufacturer.

12-07.2 MATERIALS

Bulk and Panel: Materials shall include high-swelling Wyoming-type granular bentonite containing a minimum of 90 percent of montmorillonite and a maximum of 10 percent of unaltered volcanic ash or other native sediments.

12-07.2(1) BENTONITE

Materials shall meet the following requirements.

Swelling: Swelling of 2 grams of bentonite, when reduced to 100 percent passing a 100 mesh screen, shall be a minimum of 25 cubic centimeters when gradually added to a 100 ml graduate of distilled water. A minimum free swelling of 20 cubic centimeters shall be created with water samples taken from soil borings.

Active Ingredient: Hydrous silicate of alumina with approximate percentage of chemical analysis:

Silica	60.0
Alumina	20.0
Iron Oxide	5.0
Magnesia	3.0
Soda and potash oxides	3.0
Calcium oxide	0.5
Molecular water	5.5
Minor	3.0

Bentonite Panels: Panel shall contain bentonite material sealed between two layers of absorbent material. Each panel shall contain a minimum of one pound of bentonite per square foot, evenly distributed and shall be 48-inches square by minimum 3/16-inch thick.

Bentonite Mineral-Base Jelly: Material shall meet requirements of ASTM D217 for a worked penetration range of 225 to 275 and shall contain 10 percent of controlled hydrated Wyoming type high-swelling bentonite by weight.

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Bentonite mineral-base jelly shall have a minimum pH of 8.8, contain no free water, and have a maximum of 6 percent residual swell.

12-07.3 CONSTRUCTION REQUIREMENTS

12-07.3(1) SURFACE PREPARATION

All surfaces shall be examined and determined to be satisfactory for receiving treatment prior to starting work. Surfaces to receive bentonite waterproofing treatment shall be free from irregularities. Remove loose and foreign material. Remove form tie rods. Point Cracks and honeycombs in concrete surfaces with cement mortar flush with adjacent concrete surfaces. Allow cement mortar to dry for a minimum of 72 hours prior to application of bentonite panels.

12-07.3(2) APPLICATION

Apply waterproofing on exterior below-grade surfaces of concrete walls and below grade slab floor where shown on the drawings. Apply waterproofing in accordance with manufacturer's printed instructions. Securely fasten panels over all construction joints and all expansion joints. Thoroughly pack all through-wall openings and penetrations with bentonite gel or granular bentonite, or both, prior to placement of bentonite panels.

12-07.3(3) PROTECTION

Provide protection to the bentonite panels during backfilling operations as recommended by the manufacturer of bentonite materials.

12-07.3(4) CORRECTIONS

All leaks and defective areas shall be remedied before final acceptance of the work.

12-07.4 MEASUREMENT

Waterproofing by bentonite will be measured by the square foot of projected wall and floor area treated.

12-07.5 PAYMENT

Payment will be made for the bid item:

"Waterproofing" per square foot.

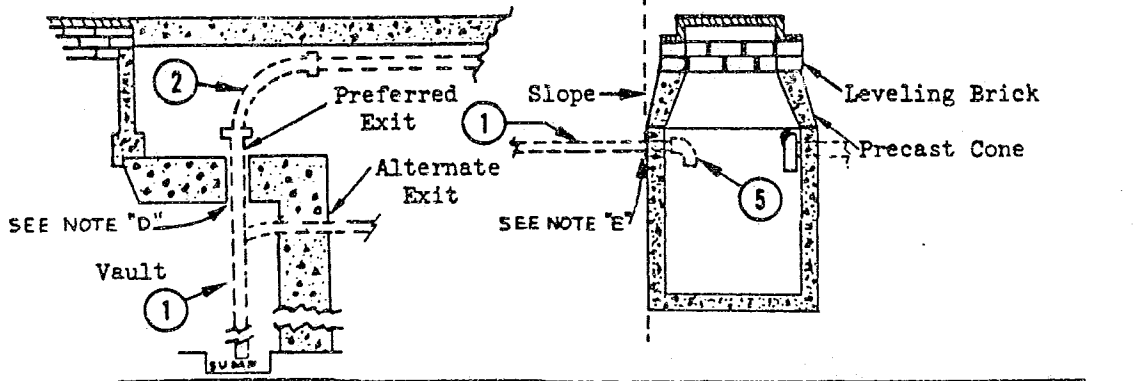
The unit bid price for "Waterproofing" shall be full compensation for furnishing all labor, materials, tools and equipment necessary to furnish and install the waterproofing described in this section and as shown on the drawings.

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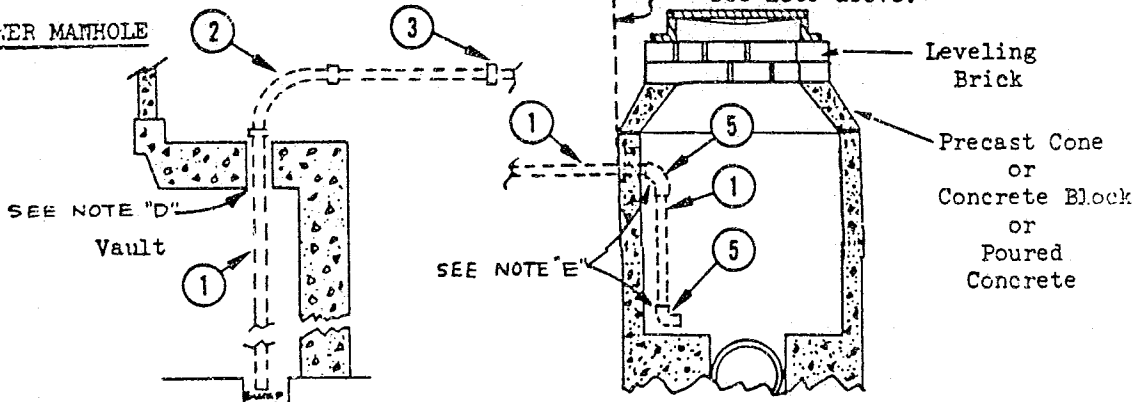
DATE: May 9, 1962  
Rev: June 28, 1982

SUMP DISCHARGE PIPE INSTALLATION  
VAULTS AND MANHOLES

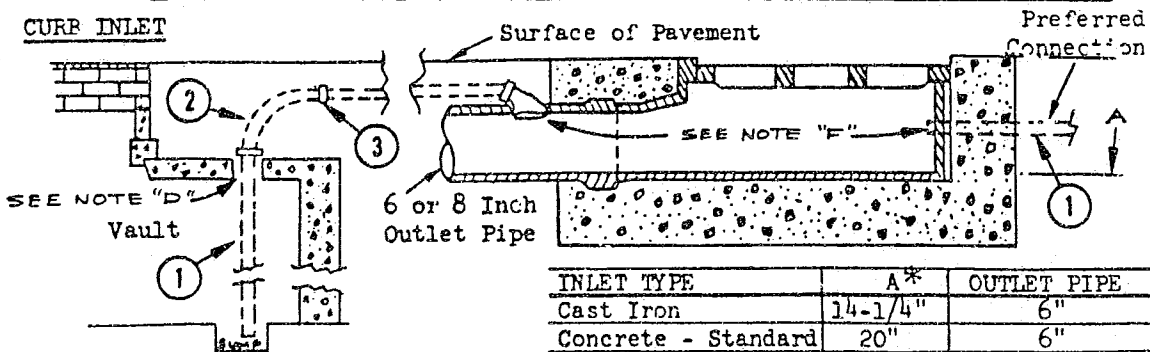
CATCH BASIN



SEWER MANHOLE



CURB INLET



INLET TYPE	A*	OUTLET PIPE
Cast Iron	14-1/4"	6"
Concrete - Standard	20"	6"
Concrete - Large	23"	8"

Note: In areas with separate storm sewers, the sump pump piping shall discharge into the storm sewer system.

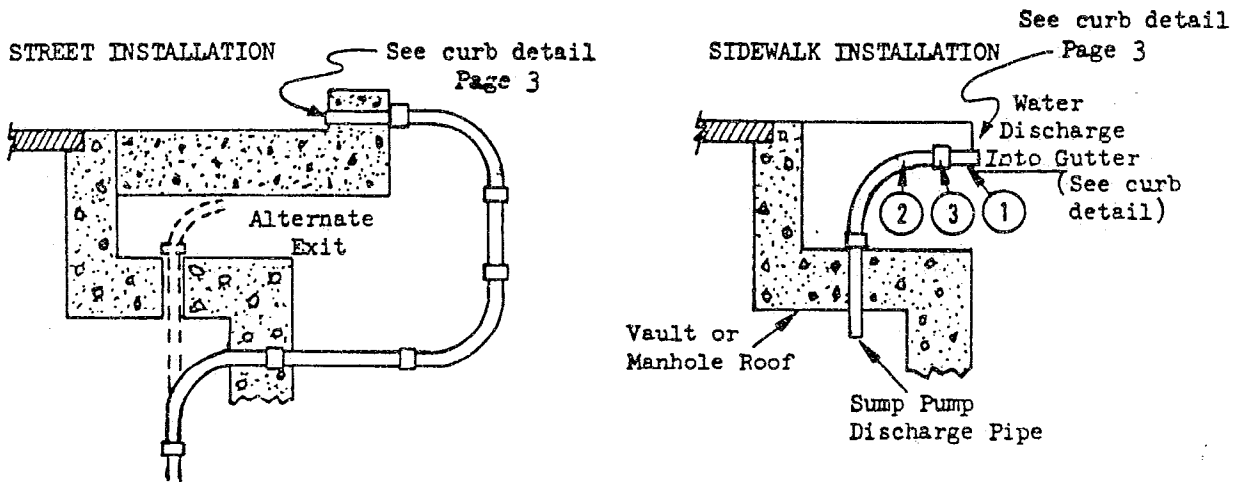
NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

STANDARDS COMMITTEE CHAIRMAN	STANDARDS COORDINATOR	DISTRICT HEAD	STEERING COMMITTEE CHAIRMAN
<i>D.E. Edwards</i>	<i>E.R. Hall</i>	<i>[Signature]</i>	<i>[Signature]</i>

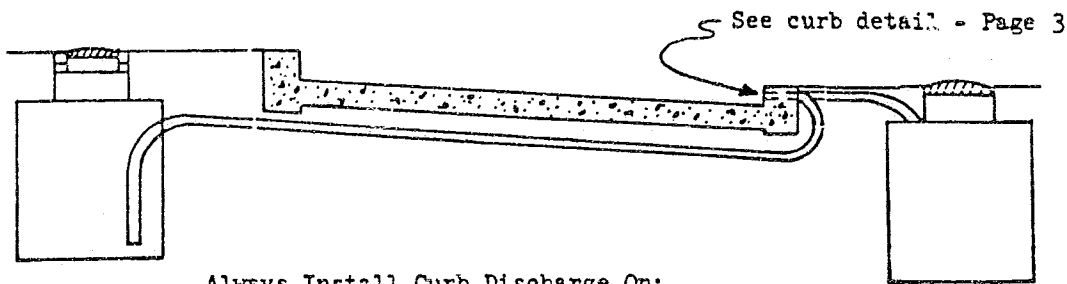
SUMP DISCHARGE PIPE INSTALLATION

VAULTS AND MANHOLES

DISCHARGE TO CURBS



Locate Curb Discharge  
 Down Hill From Vault



Always Install Curb Discharge On:  
 Low Side of Sloping Streets

Curb Discharge Should Be Downgrade From Manhole Or  
 Vault So Water Cannot Recirculate

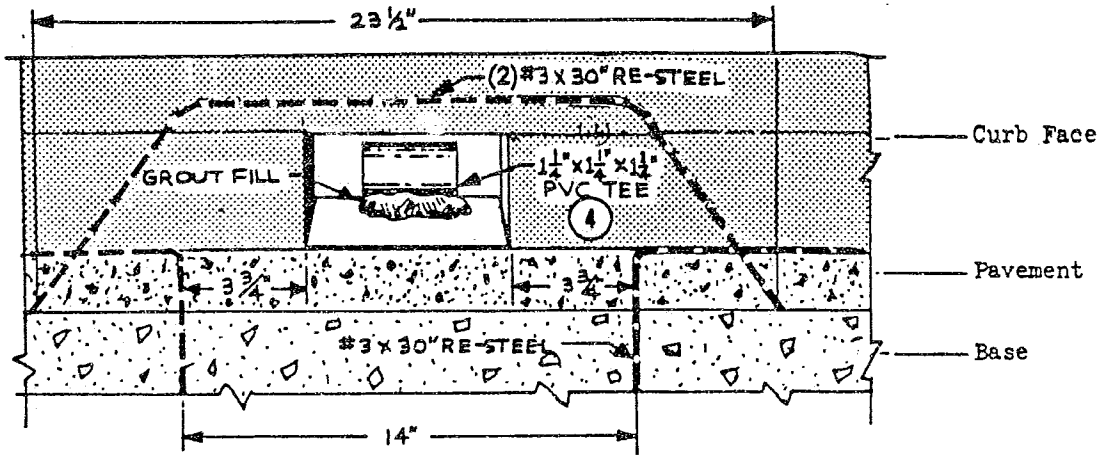
NOTE: Use when sewer connection is excessively remote.

See Page 3 for Anti-Splash Discharge In New or Rebuilt  
 Curbs.

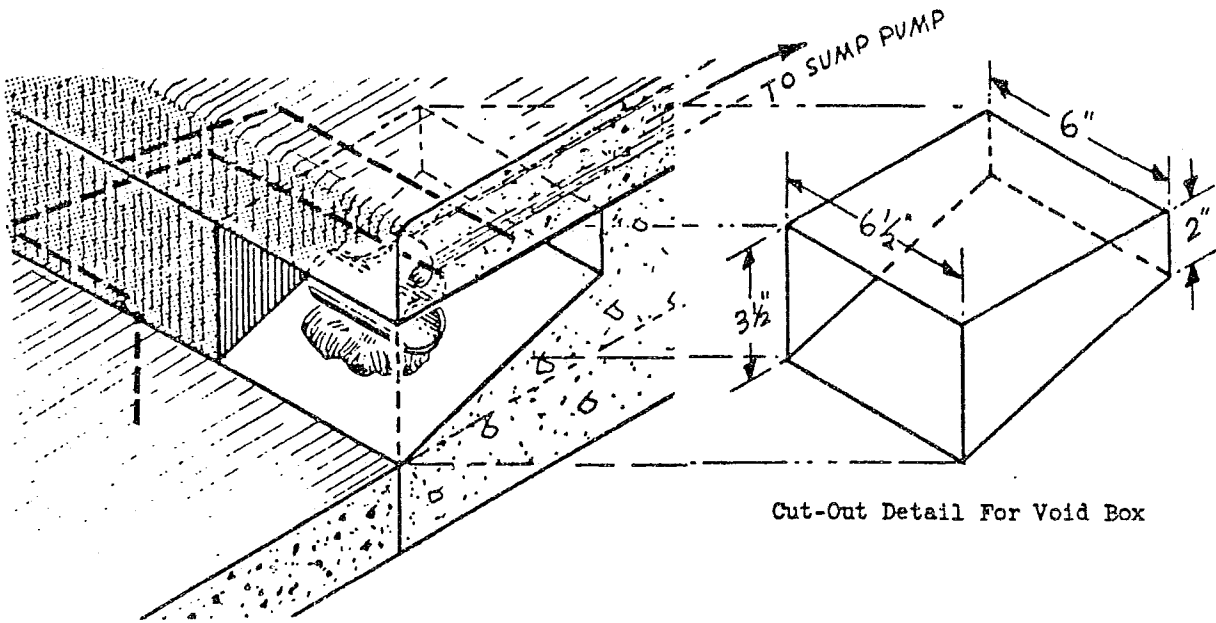
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STANDARD CODE	STANDARD CODE	DATE	STANDARD CODE
AS 5-1-10	AS 5-1-10	AS 5-1-10	AS 5-1-10

SUMP DISCHARGE PIPE INSTALLATION  
VAULTS AND MANHOLES  
ANTI SPLASH DISCHARGE IN NEW OR REBUILT CURBS  
METHOD OF CONSTRUCTION



FRONT VIEW



CROSS SECTION

Cut-Out Detail For Void Box

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STANDARD'S COMM. TREE CHAIRMAN	STANDARD'S COORDINATOR	DIVISION HEAD	STREET & COMM. TREE CHAIRMAN
<i>D.F. Edwards</i>	<i>S.F.L.H.</i>	<i>Atkins</i>	<i>R. Hood</i>

SUMP DISCHARGE INSTALLATION  
VAULTS AND MANHOLES

- A. Run 1-1/4" PVC conduit, Schedule 40, from vault or manhole to nearest sewer connection, subject to the following conditions:
  - 1. Where a trench has been excavated for duct or conduit, use the trench for the discharge pipe, provided that the length of the run does not exceed 120 feet.
  - 2. Where a trench must be provided in unpaved areas, the length of pipe shall not exceed 60 feet.
  - 3. Where a trench must be provided in paved areas, the length of pipe shall not exceed 20 feet.
  - 4. See details on the contract drawings.
- B. In all other cases, the 1-1/4" PVC conduit shall discharge to the curb. Locate the discharge point downhill of the vault to conserve pump head and to avoid refilling the vault. Install anti-splash guard on all curb discharge pipes.
- C. The total vertical lift, from sump to discharge point, shall never exceed 25 feet.
- D. The preferred exit from a transformer vault or manhole is the hole in the roof slab, when provided. An alternate exit through a wall knockout may be used when the elevation of the transformer vault is considerably higher than the elevation of the discharge point. In either case, the exit is to be caulked after insertion of the 1-1/4" PVC conduit. When the conduit is to be stubbed off in the vault or manhole, it shall extend at least 4" into the structure.
- E. The discharge pipe from the City Light manhole or transformer vault shall enter the sewer manhole or catch basin below the cone. An "ell" shall be used inside the sewer manhole to divert the water through conduit to the base of the sewer manhole. Similarly an "ell" shall be installed inside the catch basin to divert the water downward. It is not necessary to carry the pipe to the base of the catch basin.
- F. When entering curb inlets, the preferred entrance is through the back (end plate) of the inlet box. The PVC conduit should be installed so that it is flush with the inside surface of the box and sealed in place with mortar. Entrance shall never be made into the side of the inlet box. An alternate to the above procedure is to terminate the discharge pipe in a "wye" grafted to the concrete tile leading from the inlet box. The annular space around the PVC pipe in the "wye" shall be mortared closed.
- G. All work in sewer manholes, catch basins, or curb inlet outlet pipes shall be performed by the City of Seattle Engineering Department using contractor-furnished materials. The only exception to this policy is the connection at the back of the inlet box which shall be made by the contractor.

ITEM NO.	QUANTITY	DESCRIPTION	STOCK NO.
1	As Req'd	Conduit, PVC, Schedule 40 1-1/4"	734528
2	As Req'd	Bend, PVC, Schedule 40 1-1/4"	734546
3	As Req'd	Coupling, PVC 1-1/4"	734515
4	As Req'd	Tee, PVC 1-1/4"	
5	As Req'd	Ell, PVC, Schedule 40 1-1/4"	

**NOTE:** Item 4 may be added to Page 3 as indicated. The quantity would consistently be 1.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

SEATTLE CITY LIGHT  
CONSTRUCTION STANDARDS

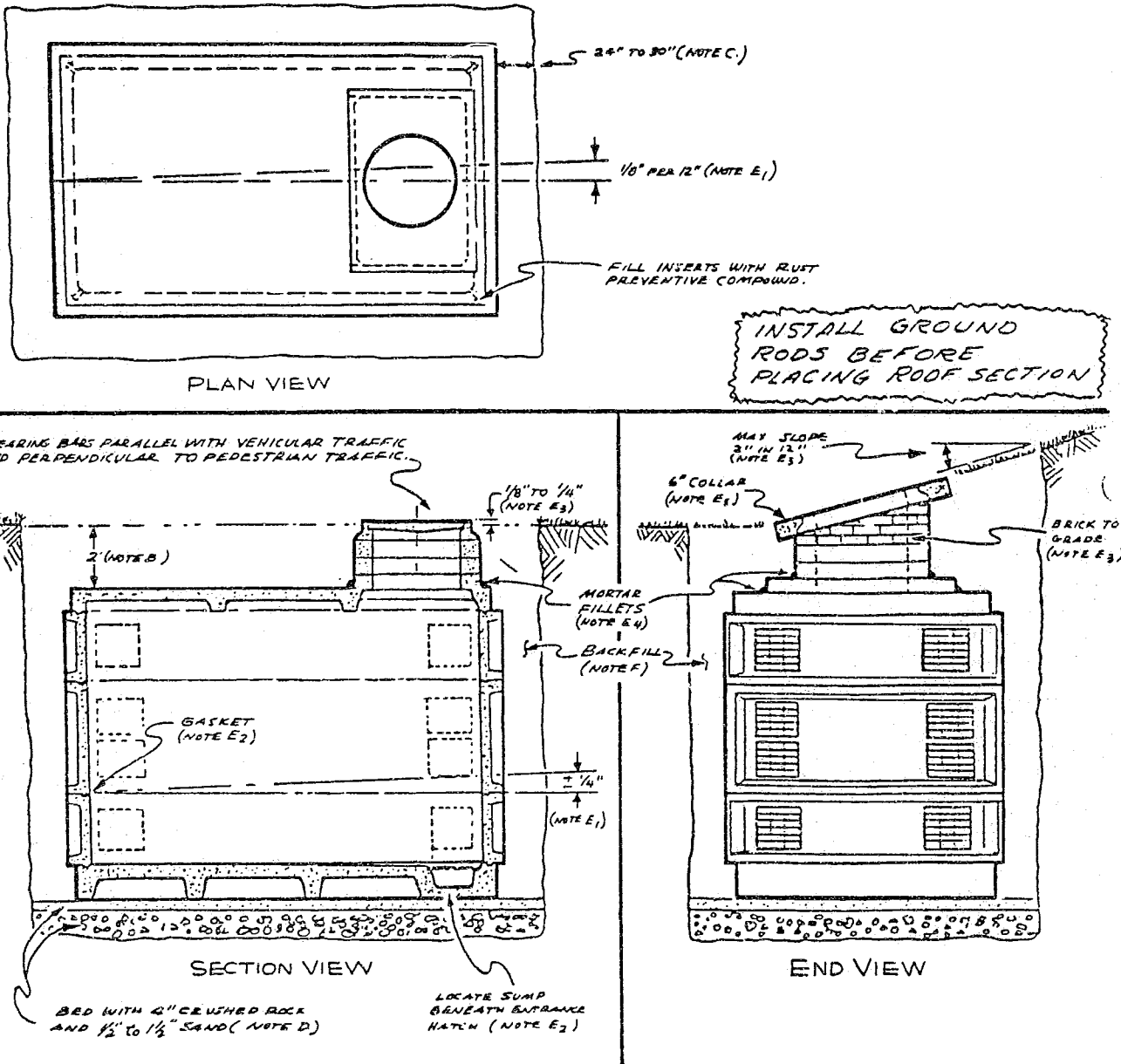
No. U2-13

Page 1 of 2

DATE: Nov. 12, 1974

Rev: 5-13-86

INSTALLATION OF 687 TYPE VAULTS  
AND LARGER



NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Typical 814 Type Vault Installation

Vault configurations vary.

ORIGINATOR	STANDARDS COORDINATOR	STANDARDS SUPERVISOR	UNIT DIRECTOR
<i>John Amico</i>	<i>D. E. Pears</i>	<i>J. A. Remaldo</i>	<i>A. H. A. V. in</i>

INSTALLATION OF 687 TYPE VAULTS AND LARGER

- A. CODES. All work, including shoring and bracing, shall meet all requirements of Washington State "Safety Standards for Construction Work", WISHA.
- B. COVER. Measurements from the vault top at the point of least depth to the pavement or ground above shall be 2' except as noted otherwise. A tolerance of up to 6" deeper shall be allowed. Over 6" with permission of the Engineer.
- C. EXCAVATION.
1. Excavate so there is not less than 24", or more than 30", between ends and sides of vault and the vertical sides of excavation or shoring unless larger excavation is authorized by the Engineer.
  2. Remove shoring before backfilling.
  3. If excavation bottom is saturated prior to placing bedding material, then over excavate area as-directed by the Engineer and place cobbles (3" to 8" stone- no broken concrete).
- D. BEDDING.
1. If excavation is not saturated prior to placing bedding material, compact bottom of excavation with 2 full compacting operations at right angles to each other with a mechanical compactor.
  2. Place a layer of crushed rock (1-3/4 minus), screed and compact to a minimum thickness of 4" and to an even level surface.
- E. INSTALLATION.
1. Setting Tolerances
    - a. Horizontal twist, end-to-end:  $\pm 1/8"$  per 12" length of vault.
    - b. Vertical, end-to-end:  $1/4"$  (to insure proper drainage into sump).
  2. Vault Parts
    - a. Do not install parts cracked or otherwise damaged so that watertightness may be impaired or parts with reinforcing exposed.
    - b. Locate sump at same end (below) as entrance hatch.
    - c. For 814 and 818 vaults, place General Sealant G.S. No. 4 in joints between vault sections. For other vaults, place 5/8"x1" butyl rubber "RUBATEX" gasket on the outer ridge of the interlocking joint.
  3. Frame and Grate
    - a. Maximum brick and mortar adjustment to level grade shall not exceed 12" (for more than 12", use an additional riser section).
    - b. Maximum slope of frame and grate shall not exceed 2" in 12" without permission of Engineer.
    - c. When bricks are required to adjust frame and grate to finish grade or to a sloping grade, place cement brick lengthwise in 1:3 cement-sand mortar.
    - d. Set on riser or brick in 1" of mortar (1 part cement to 3 parts sand with polyvinyl acetate bonding agent).
    - e. Adjust between  $1/8"$  and  $1/4"$  above grade to prevent water from entering vault, but not to cause a hazard. Ramp concrete to top of frame for gradual transition.
  4. Seal Mortar. Place 2"  $\pm$  mortar fillets to seal out water at joints between vault top, cover slab, risers and frame.
  5. Concrete Collar. In areas other than concrete or asphalt, place square or rectangular collar around the frame. Class 5 concrete collar shall be a minimum of 6" wide and a minimum of 6" thick. Reinforce collar with #4 bar placed in mid-section, joints overlapped.
  6. Filling Spaces. Fill spaces between ground rods and floor slab and other spaces through walls, tops and slabs with dry pack mortar mixed with "Weldcrete" polyvinyl acetate bonding agent in accordance with the manufacturer's directions.
  7. Install a permanent ladder in the vault if the distance from the top of the grate to the vault floor exceeds 13 feet. See City Light Drawing C-5871.
- F. BACKFILL Backfill to 95% compaction with same materials as the bedding, except the crushed rock. Use the excavation material when deemed suitable. Backfill so no voids are left under the reinforcing ribs of riser sections.
- G. VAULTS OR MANHOLES SET WITHIN 5'-0" OR OVER SEWERS WILL REQUIRE REPLACEMENT OF THE SEWER PIPE WITH CIP. CIP TO BE PLACED BEYOND THE VAULT AT EACH END A MINIMUM OF 3'-0" AND/OR TO UNDISTURBED SOIL AT LEAST 2'-0". THE UTILITY OR CONTRACTOR SHALL FURNISH CIP, FITTINGS, EXCAVATION, BACKFILL AND RESTORATION. INSTALLATION OF THE PIPE WILL BE MADE BY THE SEATTLE ENGINEERING DEPARTMENT.
- REFERENCE: Standards U8-7.3 Vault Grounding  
U2-11 Duct Installations  
U2-12.1 Sump Discharge Pipe

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

ORIGINATOR	STANDARDS COORDINATOR	STANDARDS SUPERVISOR	UNITY DIRECTOR
<i>John Amman</i>	<i>J. E. Parry</i>	<i>J. O. Reynolds Jr.</i>	<i>D. A. DeWitt</i>

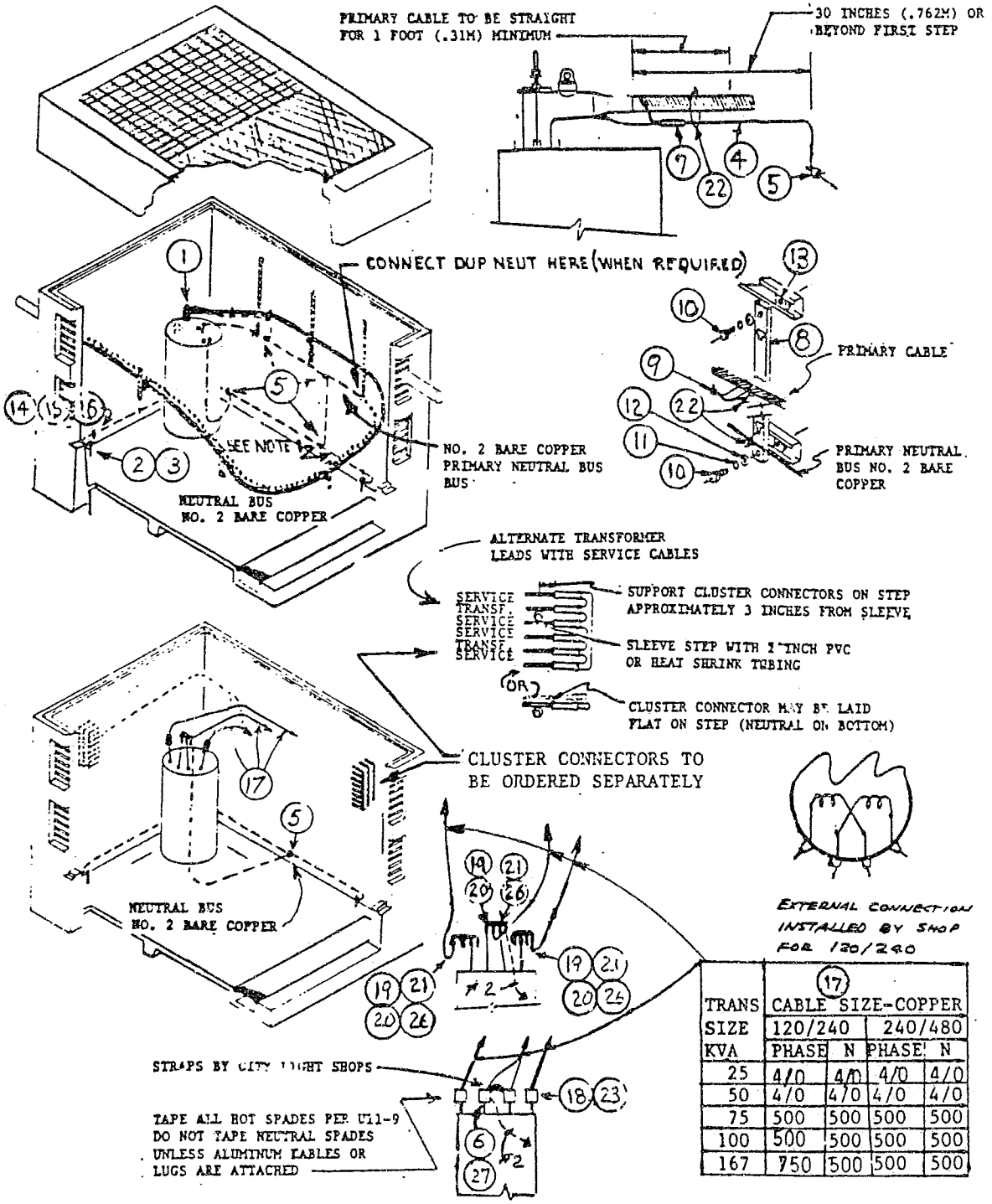
SEATTLE CITY LIGHT  
CONSTRUCTION STANDARDS

No. U8-7.3  
Page 1 of 2

GROUNDING AND CONNECTION DIAGRAM  
SINGLE PHASE 26KV DISTRIBUTION TRANSFORMER  
6' x 8' x 7' VAULT OR LARGER

DATE: June 26, 1974  
REV: Dec. 30, 1983

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.



TRANS SIZE KVA	CABLE SIZE-COPPER			
	PHASE	N	PHASE	N
25	4/0	4/0	4/0	4/0
50	4/0	4/0	4/0	4/0
75	500	500	500	500
100	500	500	500	500
167	750	500	500	500

STANDARDS COMMITTEE CHAIRMAN <i>A.E. Edwards</i>	STANDARDS COORDINATOR <i>E.R. Hall</i>	DIVISION HEAD <i>[Signature]</i>	STEERING COMMITTEE CHAIRMAN <i>[Signature]</i>
---	---	-------------------------------------	---

CONSTRUCTION STANDARDS

GROUNDING AND CONNECTION DIAGRAM  
SINGLE PHASE 26KV DISTRIBUTION TRANSFORMER  
6' x 8' x 7' VAULT AND LARGER

NOTES:

1. Attach copper ground bus to vault wall 6" above floor using pipe straps and anchor bolts, Material List #11 & 12
2. If J-Boxes, switches or other primary equipment is installed in the same vault, connect primary neutrals to the primary neutral bus. (Equipment grounds may be attached to the ground bus.)
3. Primary cable is to route so that it is racked on at least two walls.
4. Generally, secondary is racked above the primary.
5. Install HIGH VOLTAGE sign ( Stock # 765181 ) on all above grade installations.
6. When specified, install sump pump and/or vault lights per U2-12.2.
7. All secondary leads to be laid straight on steps (hooks) with no intertwining of the leads.
8. Cable Tagging per U 4-3.3
9. To avoid induced currents and heating of the steps and racks, DO NOT lay separate phase conductors on separate steps.
10. Connect only the neutrals on all idle services.
11. Generally, up to 4 sets of service cables may be connected directly on the transformer spades or cluster connectors providing,
  - A. Service cables are no larger than 500 mcm if to be connected on cluster connectors.
  - B. Service cables are no larger than 750 mcm if to be connected on the transformer spades.
12. Cluster connectors shown on the vault walls are to be ordered separately with the following considerations:
  - A. Residential, light industrial or light commercial type.
    - 1) Available in 3,4,6 or 8 position with street light tap (Stk. #678800, 678707, 678713 & 678715)
    - 2) Maximum cable size is 500 mcm per position since the cluster connector requires 7/8" bolt spacing, hook type lugs ( STK. NO. 678687 THRU 678700 )
    - 3) Each cluster connector weights approximately 4 1/2 lbs (2 kg)
  - B. Heavy Duty Type
    - 1) Available in 4, 6 & 8 position (Stk. #678760 thru 678763)
    - 2) Maximum cable size is 1000 mcm per position. These connectors require 1-3/4 inch bolt spacing lugs (Stk. #651255 thru 651272 for Aluminum and 677065 thru 677100 for Copper)
    - 3) Each heavy duty cluster connector weights approximately 16 pounds (7.25 kg)
13. In lieu of ground rods, 50 feet (15.25 m) of #2 bare stranded copper wire, per rod, may be laid in the bottom of the trench in opposite directions. The wire shall be a minimum of 6" (.15m) away from other cables, conduits or concrete encasements.

MATERIAL LIST

ITEM	QUANTITY	DESCRIPTION	STOCK NO.
1	1	ELBOW, DEAD BREAK, 15.2 KV TO GROUND	686416
2	2	ROD, GROUND, 5/8" x 8' COPPER CLAD	564238
3	2	CLAMP, GROUND ROD, 5/8" TO NO. 2 COPPER	564012
4	50 ft	WIRE, BARE STRANDED COPPER NO. 2	610434
5	6	CONNECTOR, PARALLEL, CRIMPET #2-#2	677326
6	1	TERMINAL, COMPRESSION NO. 2 COPPER	677071
7	1	SPLICE, COPPER, STRAIGHT #2 - #2	677357
8	6(est)	RACK, 30 INCH, 18 HOLE, GALVANIZED	721666
9	6(est)	6 INCH HOOK, CABLE RACK, GALVANIZED STEEL	720625
10	2(est)	14 INCH HOOK, CABLE RACK, GALVANIZED STEEL	720631
10	6(est)	BOLT, MACHINE, CADMIUM PLATED 1/2" x 1"	784825
10	6(est)	BOLT, MACHINE, CADMIUM PLATED 1/2" x 1-1/2"	784827
11	12(est)	WASHER, LOCK 1/2 INCH GALVANIZED	584255
12	12(est)	WASHER, FLAT, 1/2 INCH GALVANIZED	585025
13	12(est)	NUT, UNIFSTRUT, 1/2", P4010	723607
14	5(est)	STRAP, PIPE, 1 HOLE, GALVANIZED	713440
15	5(est)	ANCHOR, LIGHT DUTY, 1/4 - 20	780074
16	5(est)	SCREW, SLOTTED ROUND HEAD, BRASS, 1/4 - 20 x 3/4"	785827
17	50 ft	CABLE, 600 VOLT, XLP, COPPER	
		4/0	613735
		500KCMIL	613740
		750KCMIL	613743
18	3	TERMINAL, COMPRESSION LUG, COPPER	
		500KCMIL	677091
		750KCMIL	677100
19	3	CONNECTOR, MULTIPLE CLUSTER 4 POSITION	678707
20	1	TERMINAL LUG, CLUSTER CONNECTOR NO. 2 COPPER	678691
21	1	SLEEVE, INSULATING #2	678661
21	3	SLEEVE, INSULATING 2/0	678655
		4/0	678655
		500 MCM	678668
22	4(est)	TIE STRAP, 7 INCH PLASTIC	735805
22	16(est)	TIE STRAP, 14 INCH PLASTIC	735811
23		NUTS, BOLTS, WASHERS, TAPE	PER STD 011-9
24	4	TERMINAL COVER	678612
25			
26	3	TERMINAL LUG, CLUSTER CONNECTOR	
		2/0 COPPER	678687
		4/0 COPPER	678689
		350MCM COPPER	678688
		500MCM COPPER	678700
27	3	TERMINAL, COMPRESSION	
		4/0 COPPER	677081
		750MCM COPPER	677100
		500MCM COPPER	677091

STARBUCKS COMM. TYP. CHAIRMAN	STARBUCKS COORDINATOR	DIVISION HEAD	STEERING COMM. TYP. CHAIRMAN
<i>E. Edwards</i>	<i>E.R. Hall</i>	<i>[Signature]</i>	<i>[Signature]</i>

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Addendum  
Item No.Description of Change

1-a

Section 1-08.3(3) OTHER INTERFACE CONTRACTS (New Section)

Delete the list of milestones and dates and replace with the following milestones and dates:

<u>Milestone</u>	<u>Milestone Date</u>
End Holiday Construction Freeze.	Jan. 4, 1988
Complete Construction of Vaults.	Apr. 15, 1988
Piers 60, 61, 62 and 63 Ready for Survey.	Apr. 18, 1988
Piers 60, 61, 62 and 63 Ready for Beam Erection.	May 6, 1988

1-b

Section 1-08.3(4) KEY MILESTONE OF RELATED PROJECTS (New Section)

Delete the list of milestones and dates and replace with the following milestones and dates:

<u>Milestone</u>	<u>Milestone Date</u>
Start Westlake Center Construction.	Jan. 2, 1987
Start METRO Downtown Transit Project.	Jan. 2, 1987
Start Construction of Pier 64.	Mar. 1, 1988
Complete Erection of Guideway Beams	May 13, 1988
Start Installation of Substation Equipment.	May 19, 1988
Start Installation of Automatic Train Protection Equipment.	May 19, 1988
Start Installation of Passenger Boarding Ramps.	June 6, 1988
Westlake Center Tower Crane Removal.	June 13, 1988
Start Equipment and Systems Testing.	June 20, 1988
Complete Westlake Center Retail Mall (Including new Monorail Station).	Oct. 1, 1988

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT.

CONTRACT 4  
2 of 3

The following changes are hereby made to the contract documents for this project:

Addendum  
Item No.

Description of Change

Reference

1- c

Sheet No. 13 of the Contract Drawings  
In ELEVATION, PIER 60 and in ELEVATION, PIERS 61-63, change "4x3x3/16" to "4x4x3/16" in "4x3x3/16 STRUCTURAL TUBING" in a total of four instances.

Drawings - PIER  
CAPS 60-63, Sheet  
No. 13

1- d

Sheet No. 14 of the Contract Drawings  
In PLAN AT BEARING, change the solid lines showing the southerly shear lug to dotted lines, similar to those denoting the northerly shear lug.  
In PLAN AT BEARING, change "4x3x3/16" to "4x4x3/16" in "4x3x3/16 STRUCTURAL TUBING" at both 1-1/2" diameter bolts.  
In SECTION B, at EXPANSION END, add ", NIC" after "6" DOUBLE EXTRA STRONG STEEL PIPE". Change the solid lines showing the same pipe to dotted lines and add "NIC" to weld symbol.  
In SECTION B, add the following note to one of the four studs embedded in the piercap: "5/8"  $\emptyset$  x 6" WELDED HEADED STUD, TYPICAL."  
In SECTION D, delete "AT FIXED END" from notation "NIC AT FIXED END". Change the solid lines denoting the 6" Double Extra Strong Pipe to dotted lines.  
In SECTION D, change "1'-0 1/2" to "10 1/2" in "BAR 1x1x1'-0 1/2, EXPANSION END".

Drawings - BEARING  
DETAILS, Sheet No.  
14

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
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CONTRACT 4  
3 of 3

Addendum  
Item No.

Description of Change

Reference

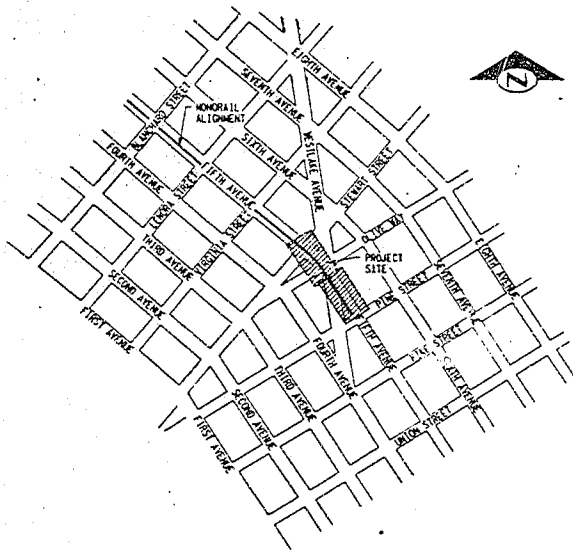
1- **C**

SECTION 6.02.3(17)K WORKMANSHIP

Insert "(Not in Contract)" after "Shear lugs" in line 4 and after "Shear bars" in line 6.

Section 6-02.3(17)K  
of the Project  
Manual, Page \_\_\_\_\_

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KEY MAP

**NOTE**

THE FOLLOWING LISTS CONTAIN THE MAJOR WORK ITEMS FOR THIS CONTRACT AND OTHER CONTRACTS THAT WILL BE CONSTRUCTED IN THE GENERAL AREA DURING THE SAME TIME PERIOD.

**N.E.C.**

**IN CONTRACT 3**

STREET AND UTILITIES WORK NORTH OF OLIVE WAY  
PAVEMENT STRIPING NORTH OF OLIVE WAY  
LAKE MARKERS NEAR FIFTH AND OLIVE WAY INTERSECTION  
PIERS 57, 58, 59 AND 64  
MONORAIL BEAMS AND BEARING PAD ASSEMBLIES, PIERS 56 TO 64  
PARTIAL REMOVAL OF EXISTING BUMPER PIER  
REMOVAL AND REINSTALLATION OF EXISTING BUMPER ASSEMBLY  
INSTALLATION OF TRACTION POWER PICK-UP RAILS  
INCIDENTAL AND RELATED WORK

**BY OTHERS**

WESTLAKE CENTER  
METRO STATION  
STREET AND UTILITIES WORK SOUTH OF OLIVE WAY  
WATER SERVICE RELOCATION NORTH OF OLIVE WAY

**IN CONTRACT 4**

PIERS 60, 61, 62 AND 63  
STONE VENEER ON PIERS 60, 61, 62, 63 AND 64  
PARTIAL REMOVAL OF EXISTING FOUNDATION, PIER 60  
UNDERGROUND EQUIPMENT VAULTS, HVAC EXHAUST STRUCTURE,  
DUCT BANKS AND CONDUITS  
INCIDENTAL AND RELATED WORK  
SEE SPECIAL PROVISIONS SECTION 0-1.66

**ABBREVIATIONS**

BVC	BEGIN VERTICAL CURVATURE
CLB	CLEAR
CS	CURVE TO SPIRAL
ENC	END VERTICAL CURVATURE
FP	FACE
SM	SIMILAR
SPA	SPACES
SC	SPIRAL TO CURVE
ST	SPIRAL TO TANGENT
STA	STATION
TS	TANGENT TO SPIRAL
VC	VERTICAL CURVE
VPI	VERTICAL POINT OF INTERSECTION

SEE SEATTLE STANDARD PLANS 0020, 0020 AND 0020 FOR SYMBOLS AND ABBREVIATIONS NOT LISTED.

**SURVEY CONTROL**

HORIZONTAL CONTROL			
STREET CENTERLINE MONUMENT LOCATION	NUMBER	NORTHING	EASTING
FIFTH AVENUE AND PINE STREET	30	226,796,3459	1,629,550,8492
FIFTH AVENUE AND OLIVE WAY	213	227,164,6662	1,629,334,0832
FIFTH AVENUE AND STEWART STREET	1356	227,274,1731	1,629,217,1907

VERTICAL CONTROL		
BENCHMARK LOCATION	NAME	ELEVATION
THREE-INCH DIAMETER METRO BRASS CAP SET IN SIDEWALK ON THE NORTHEAST CORNER OF THE INTERSECTION OF FIFTH AVENUE AND STEWART STREET.	MTG-11 M	132.531

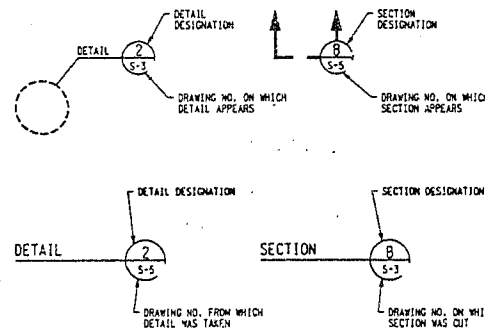
**GENERAL NOTES**

- BEFORE STARTING ANY PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE EXISTING CONDITIONS SHOWN ON THE PLANS ARE VALID.
- UTILITIES INFORMATION SHOWN ON THESE DRAWINGS WAS COMPILED FROM DATA FURNISHED BY THE VARIOUS UTILITY OWNERS AND AGENCIES. THE ACCURACY AND COMPLETENESS OF THESE DATA ARE NOT GUARANTEED.
- BEFORE STARTING ANY PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY WITH THE APPROPRIATE UTILITY OWNER OR AGENCY ALL PERTINENT DATA SHOWN, INCLUDING:
  - THE EXACT LOCATIONS, SIZES AND MATERIALS OF THE UTILITIES.
  - THE ACTUAL STATUS OF AFFECTED UTILITIES.
- UTILITIES WHICH ARE NOT ABANDONED OR REMOVED SHALL BE SUPPORTED AND MAINTAINED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THAT EXISTING UTILITIES WHICH ARE TO BE ABANDONED HAVE ACTUALLY BEEN ABANDONED BEFORE EXCAVATING.
- ALL STREET SURFACES AND SIDEWALKS IN AREAS OF EXCAVATION OR OTHERWISE DAMAGED BY THE CONTRACTOR, SHALL BE RESTORED IN ACCORDANCE WITH THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- COORDINATES AND ELEVATIONS OF MONUMENTS SHOWN WERE ESTABLISHED BY THE HORIZONTAL AND VERTICAL CONTROL SURVEY PERFORMED IN 1984 FOR THE DOWNTOWN SEATTLE TRANSIT PROJECT (DSTP).
- CONSTRUCTION SHALL CONFORM TO CITY OF SEATTLE STANDARD PLANS FOR MUNICIPAL PUBLIC WORKS CONSTRUCTION, 1986.
- CONTRACTOR IS HEREBY INFORMED THAT OTHER CONTRACTORS FOR THE DOWNTOWN SEATTLE TRANSIT PROJECT AND WESTLAKE PROJECT MAY BE WORKING IN THE AREA AT THE SAME TIME. SEE SPECIAL PROVISIONS SECTION 1-06.3.

**INDEX OF DRAWINGS**

SHEET NO.	DWG. NO.	TITLE
1	G-1	KEY MAP, GENERAL NOTES, SYMBOLS AND ABBREVIATIONS AND INDEX
2	A-1	VAULT ARCHITECTURAL DETAILS
3	A-2	ARCHITECTURAL TREATMENT - PIER 60
4	A-3	ARCHITECTURAL TREATMENT - PIER 61
5	A-4	ARCHITECTURAL TREATMENT - PIER 62
6	A-5	ARCHITECTURAL TREATMENT - PIER 63
7	A-6	ARCHITECTURAL TREATMENT - PIER 64
8	C-1	SITE PLAN - NORTH
9	C-2	SITE PLAN - SOUTH
10	S-1	STRUCTURE LAYOUT
11	S-2	GUIDEWAY PROFILES
12	S-3	PIERS 60-63
13	S-4	PIER CAPS 60-63
14	S-5	BEARING DETAILS
15	S-6	VAULT PLAN AND NOTES
16	S-7	VAULT SECTIONS
17	S-8	VAULT WALL ELEVATION & SECTIONS
18	S-9	TRANSFORMER VAULT A
19	E-1	ELECTRICAL LEGEND
20	E-2	ELECTRICAL SITE PLAN
21	E-3	EMBEDDED CONDUIT LAYOUT
22	E-4	CONDUIT DETAIL
23	E-5	GROUNDING PLAN
24	E-6	GROUNDING DETAILS
25	M-1	HVAC EXHAUST STRUCTURE
26	M-2	MECHANICAL DETAILS

**SECTION AND DETAIL REFERENCING**



- PROJECT FUNDED IN PART BY THE URBAN TRANSPORTATION ADMINISTRATION (URTA)
- CONTRACT ADMINISTRATION (URTA)

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

ENGINEERING COMPANY  
NSAJ GROUP  
CONSULTANTS, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
SCOURSOURCE CONSULTANTS  
AND ASSOCIATES, INC.



APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON  
DATE: 12/19/87

NAME OF DESIGNS AND DATE	DETAILS AND DATE
DESIGNED BY: J. J. ...	DESIGNED BY: ...
CHECKED BY: ...	CHECKED BY: ...
APPROVED BY: ...	APPROVED BY: ...

**PRIVATE CONTRACT**

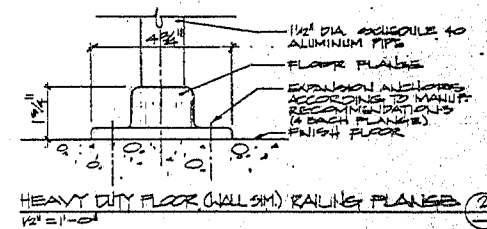
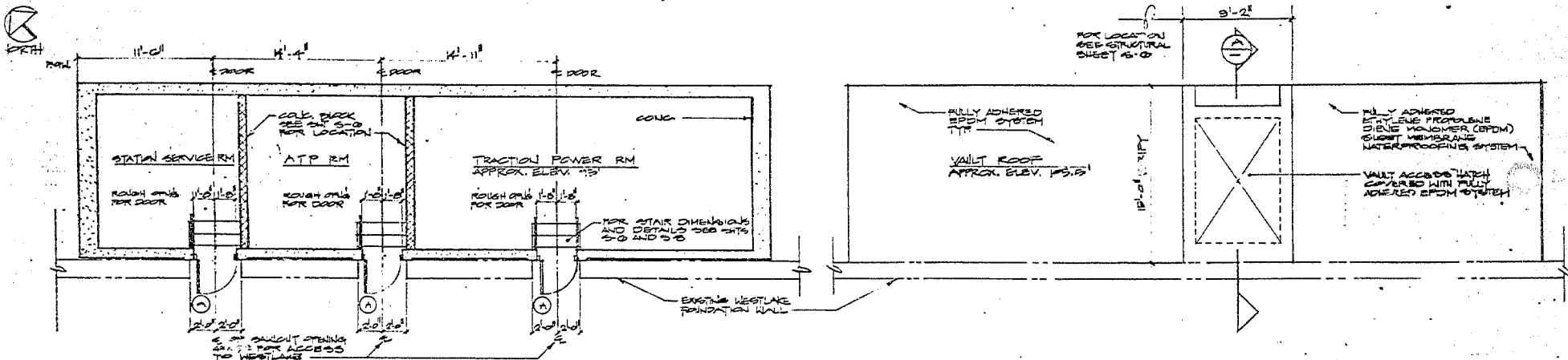
THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

APPROVED BY: ...  
DATE: ...

**KEY MAP, GENERAL NOTES, SYMBOLS AND ABBREVIATIONS AND INDEX**

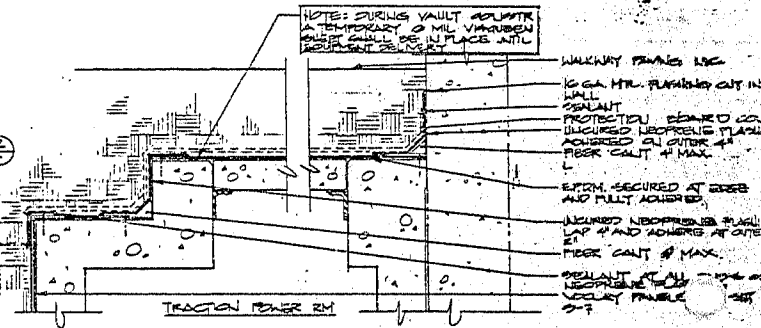
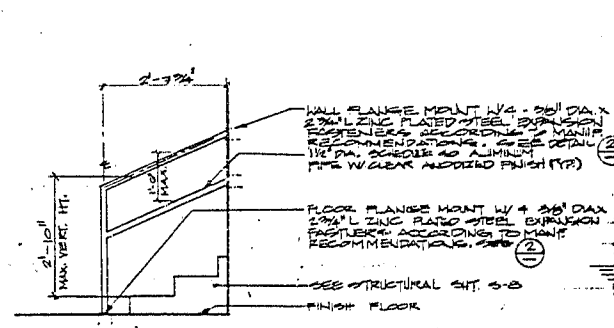
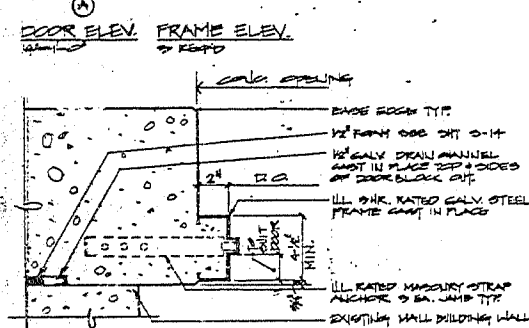
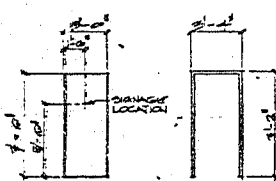
Seattle Monorail Rehabilitation and Upgrading Project  
**CONTRACT 4**  
by Guideway Relocation

PC 151553A
782-163
SHEET 11 OF 26

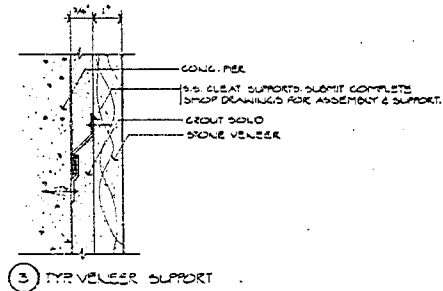
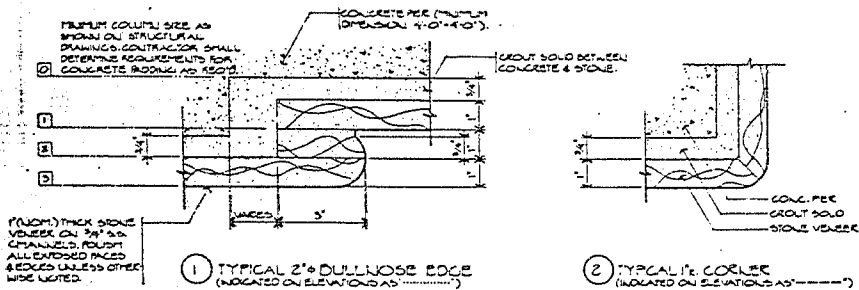


**DOOR SCHEDULE**

NO.	DOOR SIZE	TYPE	CONSTRUCTION	ILL. RATING	HARDWARE GROUP	FRAME INSTALLATION	REMARKS
A	1'-0" x 7'-0"	FLUSH	HOLLOW METAL	P-5-R	-	CAST IN PLACE	GLASS IN FRAME



KAISER ENGINEERS INC. SEATTLE, WASHINGTON FOR ENGINEERING COMPANY WESU GROUP SOH ASSOCIATES, INC.	HORTON DENNIS & ASSOCIATES, INC. MARLENE LEE LIGHTING DESIGN GEORGE SOURCE CONSULTANTS ANNE STONKOS & ASSOCIATES, INC.	APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON DATE: 11/19/97	NAME OF DISTRICT AND DATE DISTRICT: 1st Engineering District DATE: 11/19/97	METALS AND DATE DATE: 11/19/97	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING	Seattle Monorail Rehabilitation and Upgrading Project. Contract 4 By Guideway Piers and Vaults	No. S1553A SHEET 2 OF 2
		PROJECT NO. 782-163					

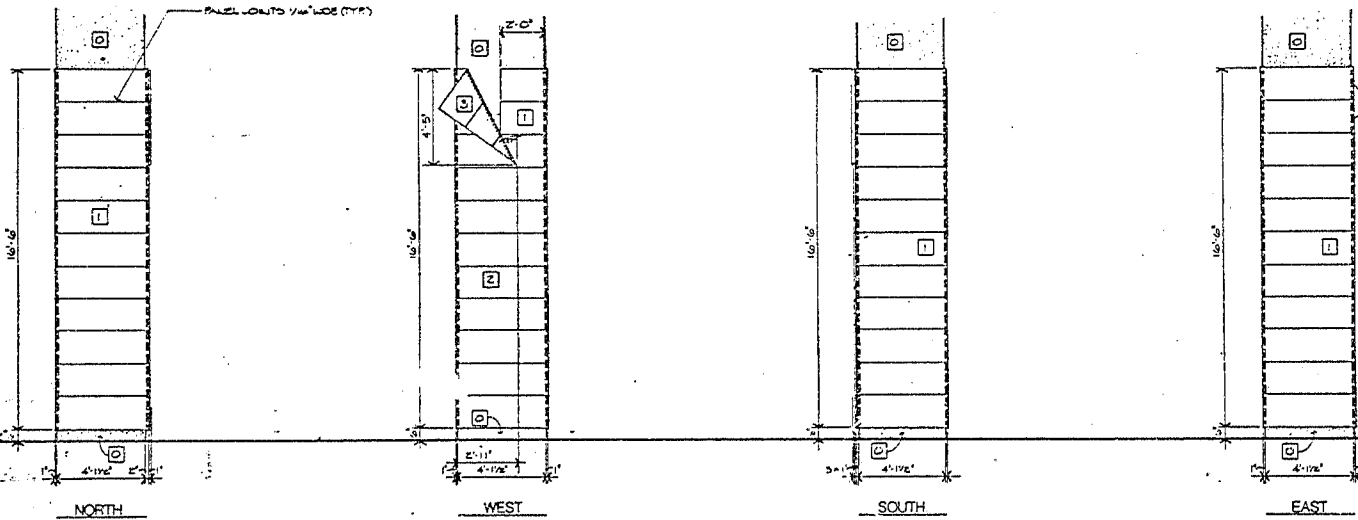


NOTE: Stone veneer fabricator shall submit complete shop drawings, detailing all stone veneer dimensions and assembly, including mounting details.

Note: Surfaces indicated thus [hatched pattern] on elevations shall be flame-finished stone veneer. All other exposed stone surfaces and edges shall be polished.

indicates layering of stone over concrete pier.

- 1 Finished Structural Concrete Pier Surface - refer to Structural Drawings
- 2 First Layer of Stone
- 3 Second Layer of Stone
- 4 Third Layer of Stone
- 5 Fourth Layer of Stone



ARCHITECTURAL TREATMENT - PIER 60

A-2

KAISER ENGINEERS INC.  
SEATTLE, WASHINGTON

R ENGINEERING COMPANY  
 HORTON DENNIS & ASSOCIATES, INC.  
 HUBBARD GROUP  
 H ASSOCIATES, INC.  
 HORTON DENNIS & ASSOCIATES, INC.  
 MARICHE LEE LIGHTING DESIGN  
 GEORGE SOURCE CONSULTANTS  
 ANNE STRONDS & ASSOCIATES, INC.

APPROVED FOR ADVERTISING  
 BY THE BOARD OF PUBLIC WORKS  
 SEATTLE, WASHINGTON  
 5/17, 1977

[Signatures and stamps for Board of Public Works approval]

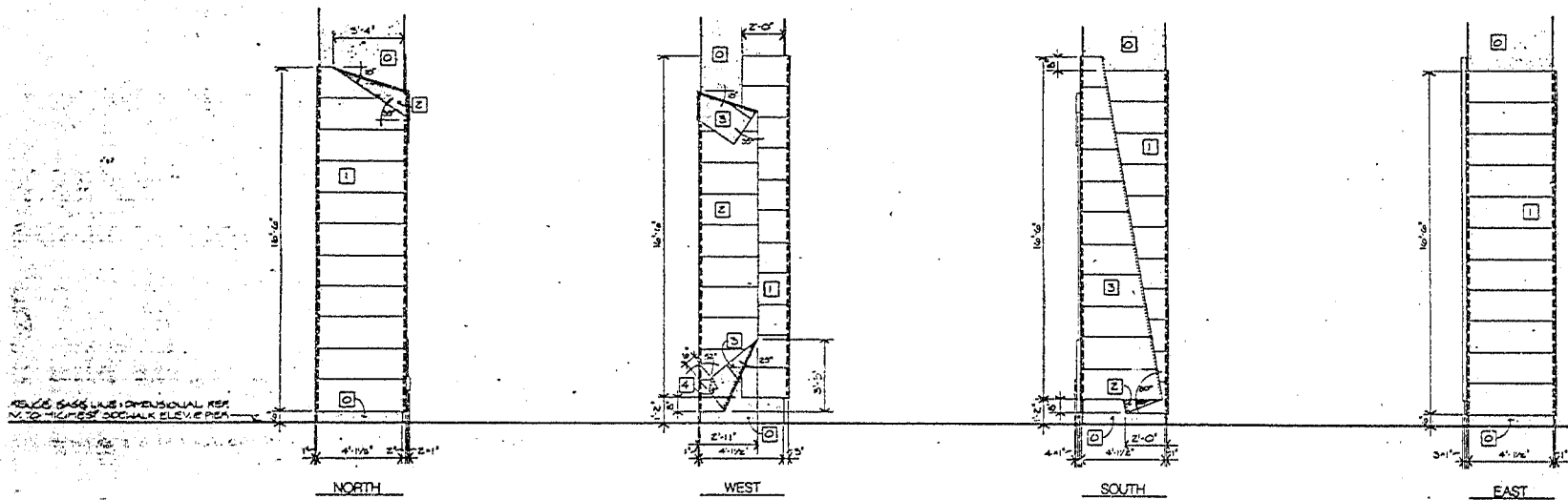
NAME OF INITIALS AND DATE  
 DESIGNER: [Signature]  
 CHECKED: [Signature]  
 DRAWN: [Signature]  
 REVISIONS: [Signature]

INITIALS AND DATE  
 REVIEWER: [Signature]  
 DATE: [Date]  
 APPROVED: [Signature]

THE CITY OF SEATTLE  
 DEPARTMENT OF ENGINEERING  
 APPROVED BY: [Signature]  
 DATE: [Date]

Seattle Monorail Rehabilitation and Upgrading Project  
 CONTRACT 4  
 by Guideway Piers and Vaults

SHEET 3 OF 28  
 732-163



ARCHITECTURAL TREATMENT - PIER 61

A-3

Seattle Monorail Rehabilitation and Upgrading Project

CONTRACT 4

by Guideway Piers and Vaults

DATE	3/25/82
BY	
NO.	
PROJECT FILE NO.	782-163
SHEET	4 OF 26

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

ENGINEERING COMPANY  
4801 GROUP  
ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEO/RESOURCE CONSULTANTS  
ANNE STIMONS & ASSOCIATES, INC.

APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON  
DATE: 8/1, 1982

ATTORNEY: *[Signature]*

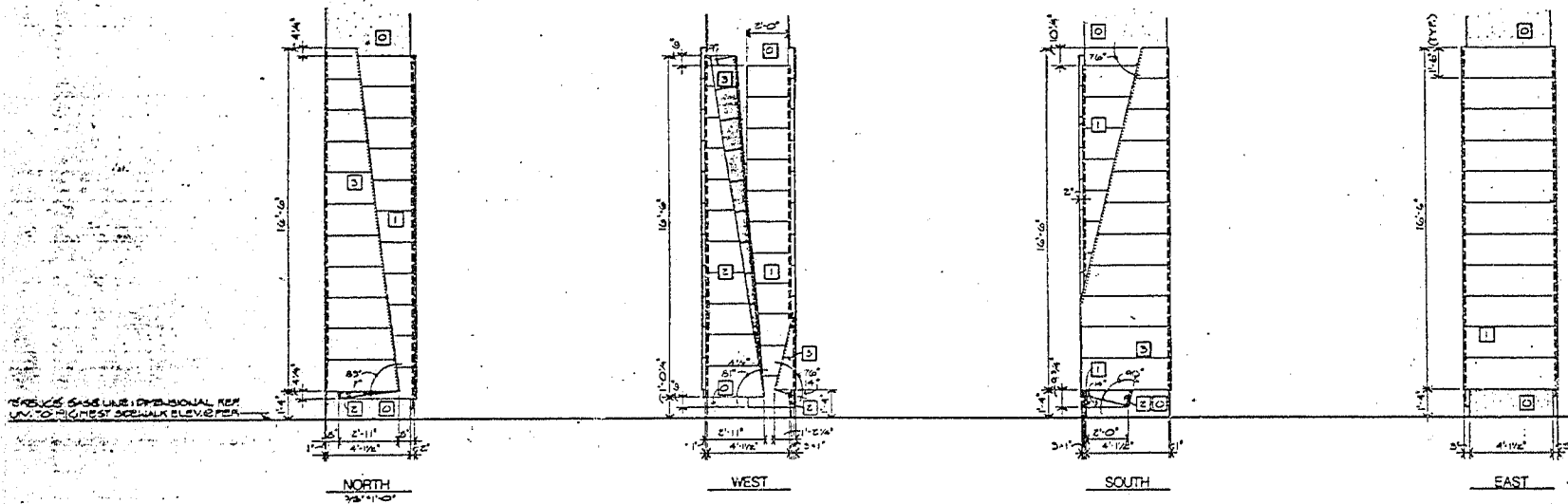
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DESIGNED BY: <i>[Signature]</i>	REVIEWED BY: <i>[Signature]</i>
CHECKED BY: <i>[Signature]</i>	DESIGNED BY: <i>[Signature]</i>
DESIGNED BY: <i>[Signature]</i>	REVIEWED BY: <i>[Signature]</i>
DESIGNED BY: <i>[Signature]</i>	REVIEWED BY: <i>[Signature]</i>

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

ORDINANCE NO. \_\_\_\_\_

FORM \_\_\_\_\_

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



ARCHITECTURAL TREATMENT - PIER 62

A-4

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON  
FOR ENGINEERING COMPANY  
HULL, COOPER  
SON ASSOCIATES, INC.  
NORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEORGE/RESOURCE CONSULTANTS  
ANNE STANHOPE & ASSOCIATES, INC.

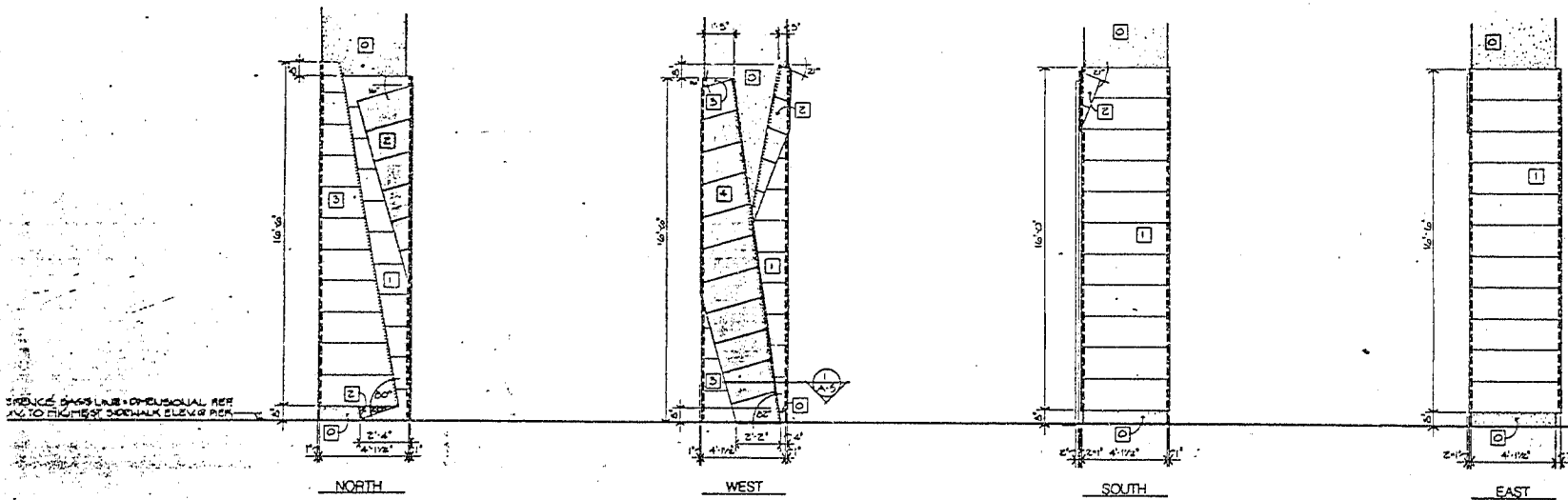
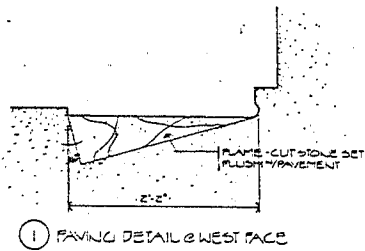
APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON  
DATE: 8/27/82  
APPROVED: [Signature]

NAME OF INITIALS AND DATE	INITIALS AND DATE
DESIGNER: [Signature]	DATE: [Signature]
CHECKER: [Signature]	DATE: [Signature]

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING  
ADDRESS: [Blank]  
PHONE: [Blank]  
SCALE: [Blank]

Seattle Monorail Rehabilitation and Upgrading Project  
CONTRACT 4  
by Guideway Piers and Vaults

PC 31927A  
8/27/82  
782-163  
SHEET 5 OF 24



ARCHITECTURAL TREATMENT - PIER 63

A-5

**KAISER ENGINEERS INC.**  
 11 SEATTLE, WASHINGTON

ENGINEERING COMPANY  
 NORTH GROUP  
 W. ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
 MARLENE LEE LIGHTING DESIGN  
 DEO/RESOURCE CONSULTANTS  
 ANNE STAMOS & ASSOCIATES, INC.

APPROVED FOR ADVERTISING  
 BY THE BOARD OF PUBLIC WORKS  
 SEATTLE, WASHINGTON

DATE: 8/7/82

NAME OF INITIALS AND DATE

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: 8/7/82

REVISIONS:

INITIALS AND DATE

APPROVED BY: [Signature]

DATE: 8/7/82

THE CITY OF SEATTLE  
 DEPARTMENT OF ENGINEERING

PROJECT NO. \_\_\_\_\_

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

Seattle Monorail Rehabilitation and Upgrading Project

CONTRACT 4

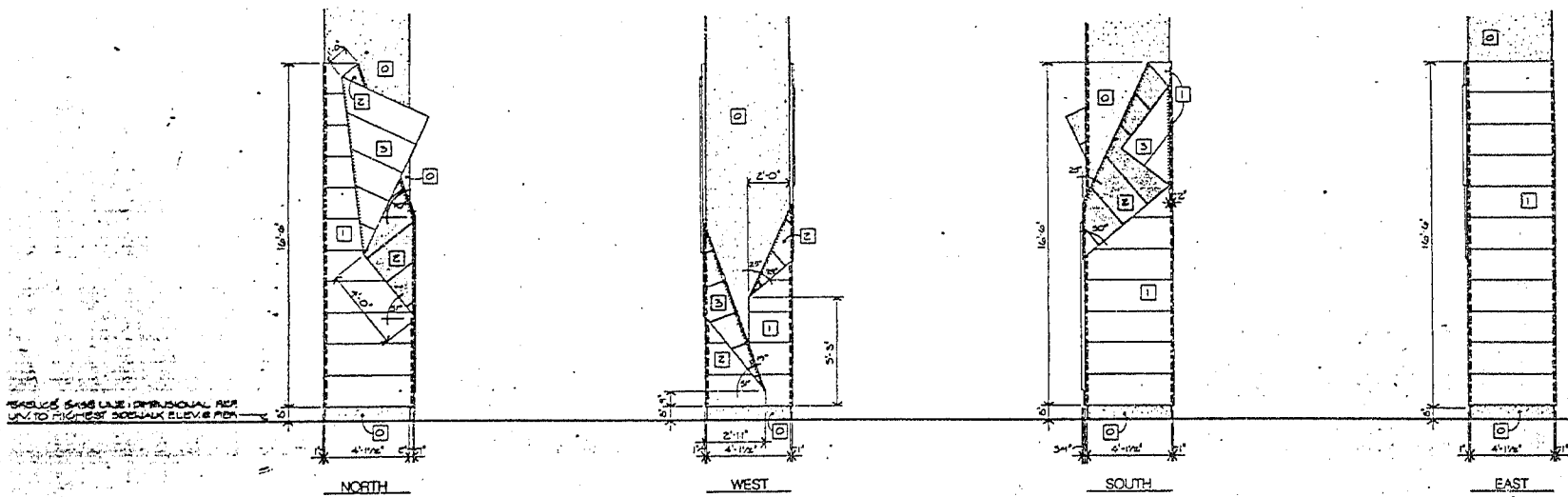
by Guideway Piers and Vaults

NO. 2193A

DATE: 8/7/82

PROJECT NO. 782-163

PAGE 6 OF 26



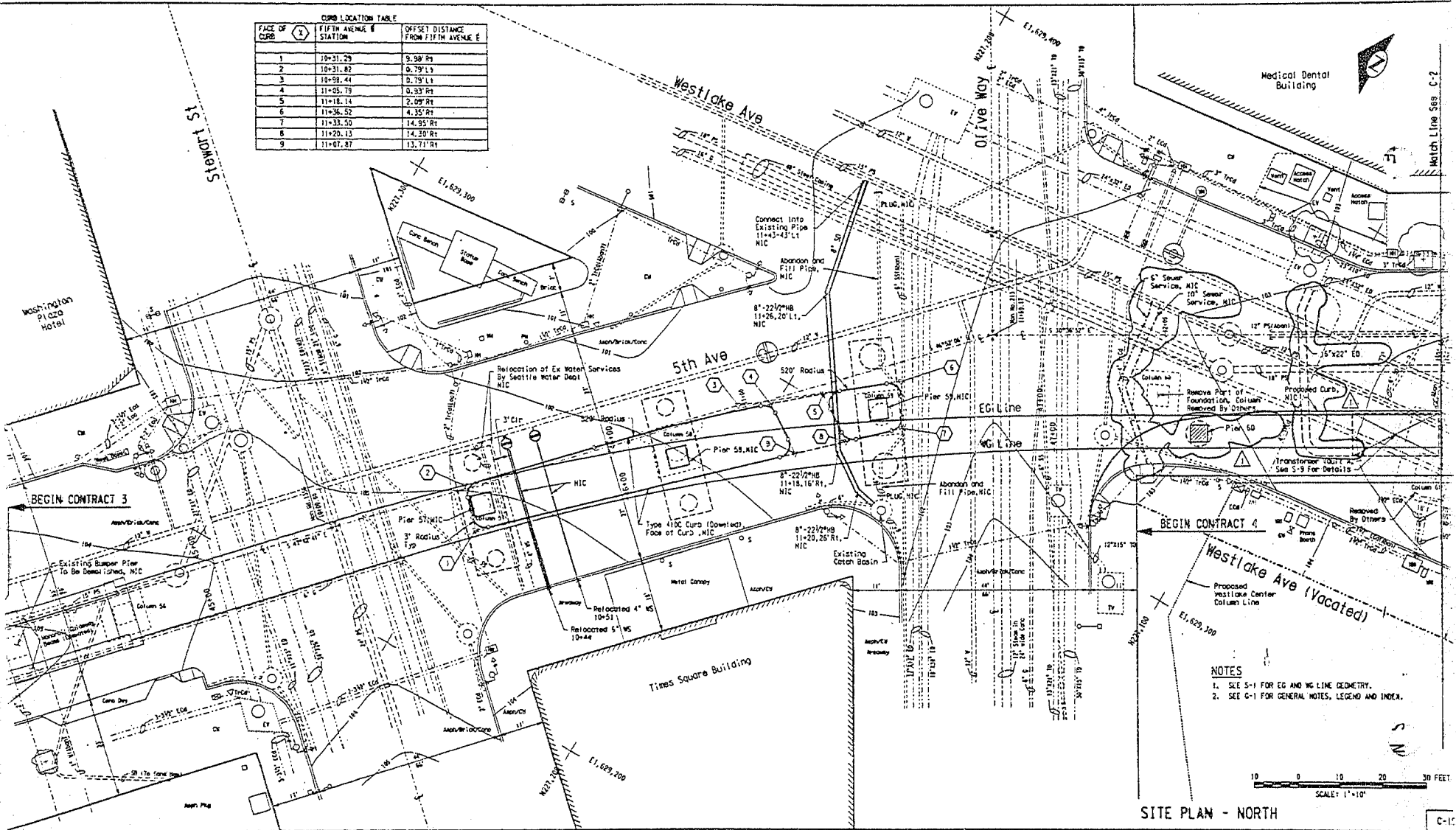
ARCHITECTURAL TREATMENT - PIER 64

A-6

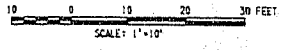
<p><b>Kaiser Engineers Inc.</b> SEATTLE, WASHINGTON</p> <p><i>in section</i></p> <p>OR ENGINEERING COMPANY NEW GROUP ON ASSOCIATES, INC.</p> <p>NORTON DENNIS &amp; ASSOCIATES, INC. MARGARET LEE LIGHTING DESIGN GEORGE/RESOURCE CONSULTANTS ANNE STRONG &amp; ASSOCIATES, INC.</p>	<p>APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS</p> <p>SEATTLE, WASHINGTON <i>4.7.87</i></p> <p>WITNESSES <i>[Signatures]</i></p>	<p>NAME OF INITIALS AND DATE</p> <p>DESIGNED BY <i>[Signature]</i></p> <p>DRAWN BY <i>[Signature]</i></p> <p>CHECKED BY <i>[Signature]</i></p> <p>SCALE: AS SHOWN</p>	<p>ENTITLED AND DATE</p> <p>REVISIONS</p> <p>BY <i>[Signature]</i></p> <p>DATE <i>[Signature]</i></p> <p>NOTED BY <i>[Signature]</i></p>	<p>THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING</p> <p>APPROVED BY <i>[Signature]</i></p> <p>DATE: <i>[Signature]</i></p>	<p>Seattle Monorail Rehabilitation and Upgrading Project</p> <p>CONTRACT 4 by Guideway Piers and Vaults</p>	<p>30000</p> <p>782-183</p> <p>7-26</p>
--	--	---	--	--	---	---



FACE OF CURB	FIFTH AVENUE W STATION	OFFSET DISTANCE FROM FIFTH AVENUE E
1	10+31.29	9.98' Rt
2	10+31.82	0.79' Lt
3	10+38.44	0.79' Lt
4	11+05.79	0.33' Rt
5	11+18.14	2.09' Rt
6	11+36.52	4.35' Rt
7	11+33.50	14.95' Rt
8	11+23.13	14.30' Rt
9	11+07.87	13.71' Rt



- NOTES
- SEE S-1 FOR EG AND WG LINE GEOMETRY.
  - SEE G-1 FOR GENERAL NOTES, LEGEND AND INDEX.



SITE PLAN - NORTH

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

FLOOR ENGINEERING COMPANY  
THE HEBU GROUP  
ELCON ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEO/RESOURCE CONSULTANTS  
JANE SIMMONS & ASSOCIATES, INC.



APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

ATTEST:

DATE OF PRINTING AND DATE  
REVISIONS

REVISION	DATE

BY: [Signature]

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

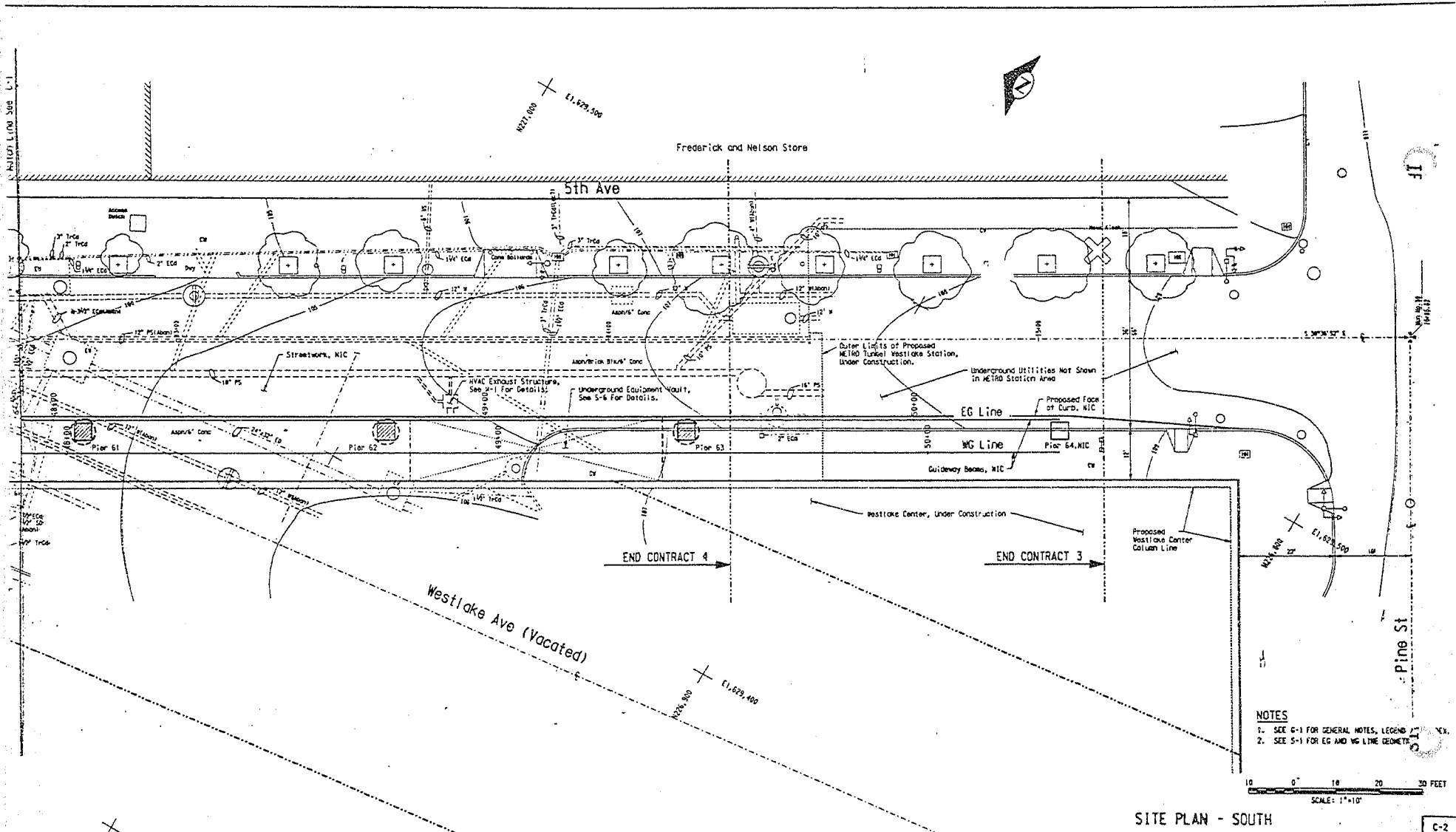
REFERENCE NO. \_\_\_\_\_ APPROVED \_\_\_\_\_

DATE: 4.17.10

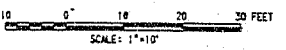
Seattle Monorail Rehabilitation and Upgrading Project  
CONTRACT 4  
by Guideway Relocation

ME: S1553A  
REV: 01  
DATE: 04/17/10  
TABLE PLAN NO.: 782-162  
SHEET 85 OF 22

*Supplemental Drawing*



- NOTES**
1. SEE G-1 FOR GENERAL NOTES, LEGEND, ETC.
  2. SEE S-1 FOR EG AND WG LINE GEOMETRY.



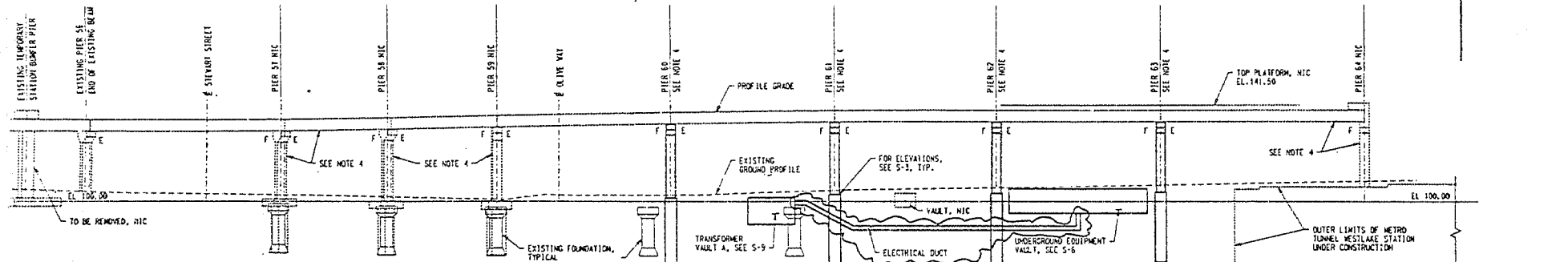
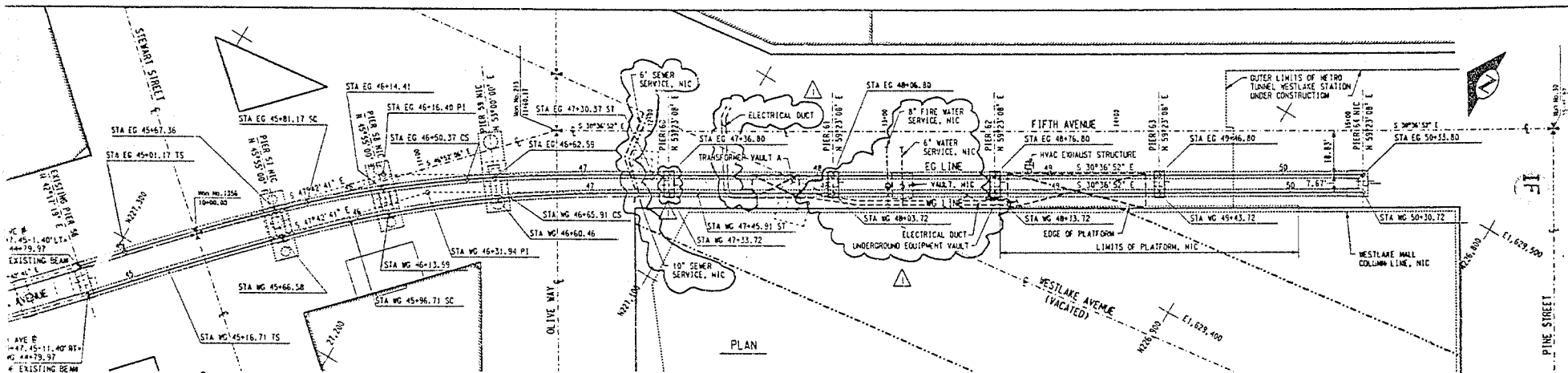
SITE PLAN - SOUTH

C-2

KAISER ENGINEERS INC. SEATTLE, WASHINGTON DR ENGINEERING COMPANY HBS&L GROUP JN ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON DATE: 11/19/87	NAME OR INITIALS AND DATE DESIGNED: S. JAMES DRAWN: S. JAMES CHECKED: S. JAMES REVISION:	INITIALS AND DATE REVIEWED: [Signature] PROJECT NO.	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING PROJECT NO. 11-117 SCALE: AS SHOWN	Seattle Monorail Rehabilitation and Upgrading Project CONTRACT 4 by Guideway Relocation	SHEET NO. 515534 782-163 SHEET 9 OF 26
		NORTHON DENNIS & ASSOCIATES, INC. MARLENE LEE LIGHTING DESIGN GED/RESOURCE CONSULTANTS ANNE STODOLSKA & ASSOCIATES, INC.	ATTEST: [Signature] SECRETARY	PROJECT NO.	PROJECT NO.	PROJECT NO.	PROJECT NO.







**GENERAL STRUCTURAL NOTES (S-1 TO S-5)**

- ALL MATERIAL AND WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION/AMERICAN PUBLIC WORKS ASSOCIATION "1984 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" AND THE CITY OF SEATTLE "SUPPLEMENT" 1986 EDITION.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS FOR LOAD FACTOR DESIGN, AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" THIRTEENTH EDITION 1983, AND THE "MONORAIL GUIDEWAY STRUCTURE DESIGN CRITERIA" DATED NOVEMBER 26, 1985.
- FOUNDATION DESIGN IS BASED ON "GEOLOGICAL INVESTIGATION WESTLAKE STATION RELOCATION MONORAIL REHABILITATION/UPGRADING PROJECT" DATED DECEMBER, 1986 AND PREPARED BY GEORSSOURCE CONSULTANTS, INC.
- THE CAST-IN-PLACE CONCRETE IN THE SHAFTS SHALL BE CLASS A MIX MODIFIED AS SPECIFIED IN THE SPECIAL PROVISIONS. CAST-IN-PLACE CONCRETE IN THE SHAFT CAPS, COLUMNS AND PIER CAPS SHALL BE CLASS A MIX.
- REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION A615 GRADE 60 UNLESS OTHERWISE NOTED.
- STRUCTURAL STEEL, EXCEPT BOLTS, SHALL CONFORM TO ASTM DESIGNATION A36 UNLESS OTHERWISE NOTED AND SHALL BE HOT-DIPPED GALVANIZED.
- DETAILING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" LATEST EDITION UNLESS OTHERWISE NOTED.
- CONSTRUCTION JOINTS SHALL BE AS DETAILED ON THE PLANS. THE LOCATION OF CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN SHALL BE APPROVED BY THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL HAVE REINFORCED SURFACES UNLESS OTHERWISE NOTED.
- THE MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- ELEVATIONS IN S-3 THROUGH S-8 ARE DRAWN LOOKING UPSTATION UNLESS OTHERWISE NOTED.
- ANCHOR BOLTS, NUTS AND WASHERS SHALL BE CADMIUM PLATED, IN ACCORDANCE WITH ASTM SPECIFICATION A165 FOR TYPE 304 STAINLESS STEEL.

**GUIDEWAY CURVE DATA TABLE**

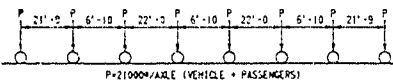
P.I. STATION	CENTRAL ANGLE	RADIUS	CURVE LENGTH	SPIRAL LENGTH	TOTAL TANGENT
STA EG 46+16.40 PI	117°05'40"	500.00'	69.20'	80.00'	149.20'
STA WG 46+31.94 PI	117°05'49"	500.00'	69.20'	80.00'	149.20'

DESIGN SPEED = 30 MPH

**COLUMN LOCATION TABLE**

PIER	FIFTH AVENUE E STATION	OFFSET DISTANCE FROM FIFTH AVENUE E
PIER 56, NIC	9+47.51	5.00' RT
PIER 57, NIC	10+34.50	4.63' RT
PIER 58, NIC	10+87.50	6.92' RT
PIER 59, NIC	11+29.54	9.11' RT
PIER 60	12+07.82	23.13' RT
PIER 61	12+77.82	21.67' RT
PIER 62	13+47.82	21.67' RT
PIER 63	14+17.82	21.67' RT
PIER 64, NIC	15+04.82	21.67' RT

- NOTES**
- SPIRALS ARE TALBOT (BARNETT) SPIRALS
  - SEE S-2 FOR TYPICAL SECTION AND WG AND EG LINE PROFILE AND SUPERELEVATION DIAGRAM.
  - SEE C-1 FOR GENERAL NOTES, LEGEND AND INDEX.
  - PIER 56-59 AND 64 CONSTRUCTION AND GUIDEWAY BEAM CONSTRUCTION AND ERECTION NOT IN CONTRACT 4.
  - "F" DENOTES EXPANSION END.



**STRUCTURE LAYOUT**

SCALE: 1"=20'

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

ENGINEERING COMPANY  
HBJ GROUP  
ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEORSSOURCE CONSULTANTS  
ANNE STODOLSKA & ASSOCIATES, INC.



APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

DATE: 11/17/07

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: 11/17/07

REVISIONS TO BE MADE BY: [Signature]

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

DATE: 11/17/07

PROJECT NO. 110707

Seattle Monorail Rehabilitation and Upgrading Project

**CONTRACT 4**

by Guideway Relocation

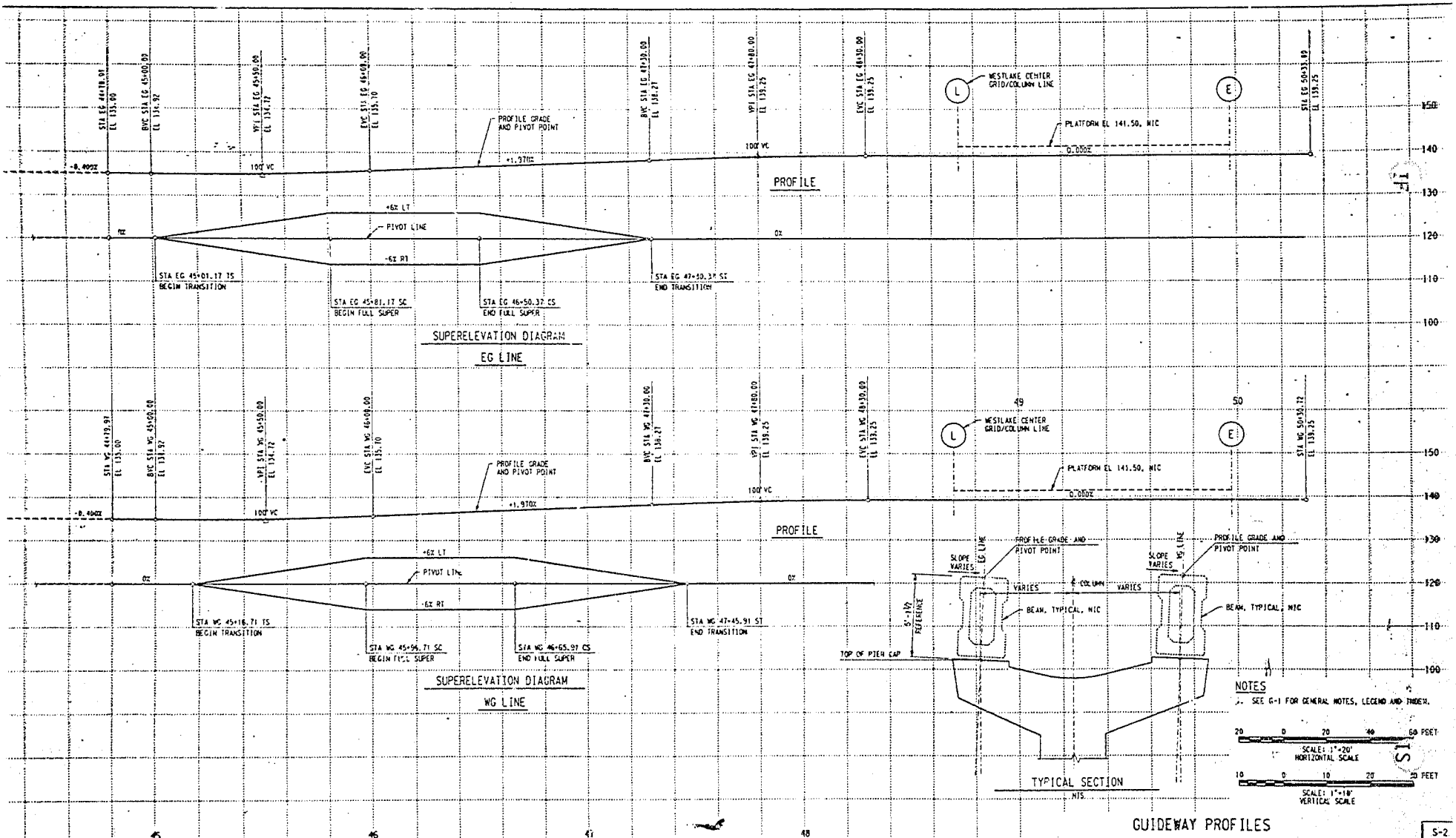
NO. S1553A

DATE: 11/17/07

782-163

SHEET NOS. OF 26

*Supplemental Drawing*



GUIDEWAY PROFILES

S-2

KATSER ENGINEERS INC.  
SEATTLE, WASHINGTON

AN ENGINEERING COMPANY  
HBJ GROUP  
AN ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEO/RESOURCE CONSULTANTS  
APRIL SIMONS & ASSOCIATES, INC.



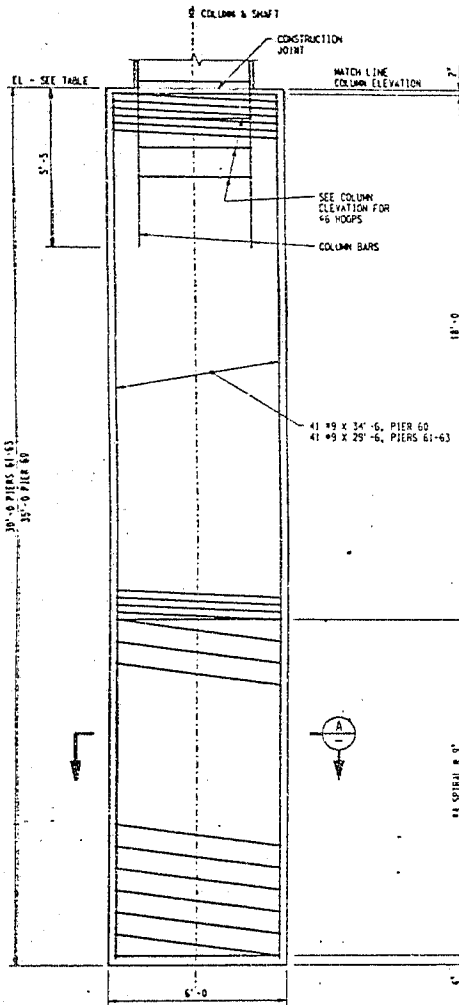
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BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON  
8/12/87  
[Signature]

NAME OF INITIALS AND DATE	REVISION
DESIGNED BY: [Signature] DATE: 8-12-87	1
CHECKED BY: [Signature] DATE: 8-12-87	2
DRAWN BY: [Signature] DATE: 8-12-87	3
REVISION NO. 1	DATE: 8-12-87

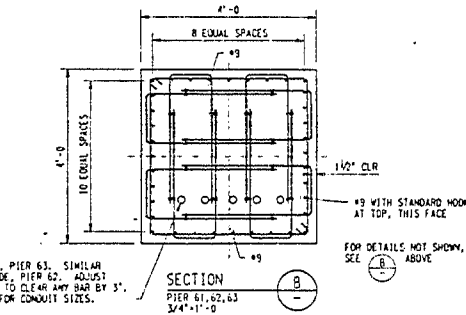
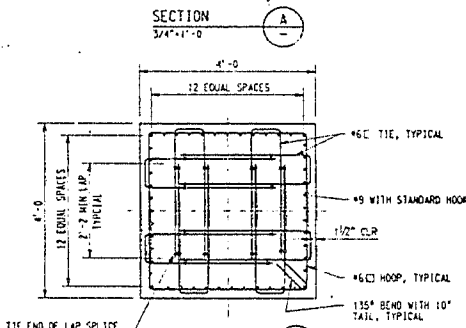
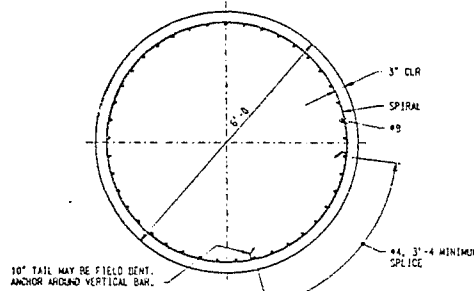
THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING  
[Signature]  
DATE: 8-12-87

Seattle Monorail Rehabilitation and Upgrading Project  
CONTRACT 4  
by Guideway Relocation

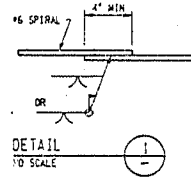
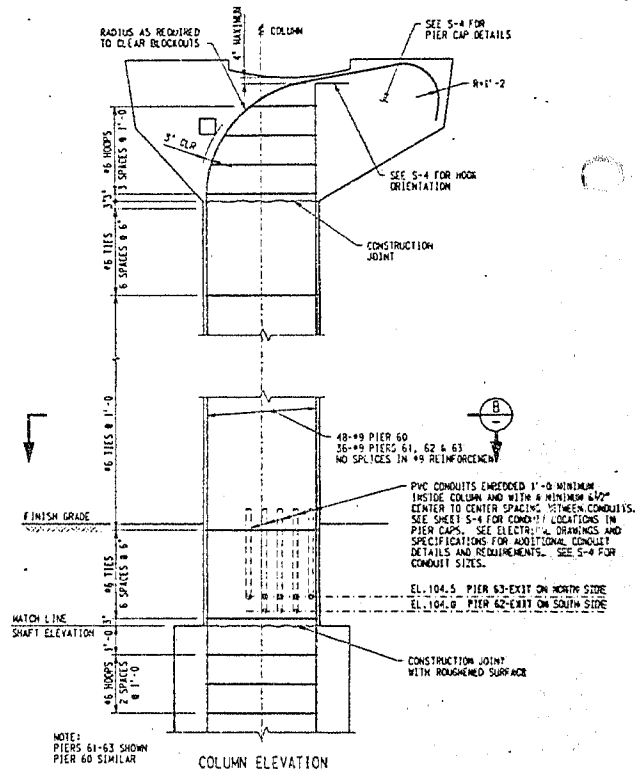
PROJECT NO. S1553A  
DRAWING NO. 782-163  
SHEET 11 OF 26



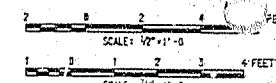
TOP-OF-SHAFT ELEVATIONS	
PIER 60	EL. 101.50
PIER 61	EL. 102.50
PIER 62	EL. 103.50
PIER 63	EL. 104.00



CONDUITS, PIER 63, SIMILAR SOUTH SIDE, PIER 62, ADJUST LOCATION TO CLEAR #9 BAR BY 3". SEE S-4 FOR CONDUIT SIZES.



- NOTES
1. SEE ARCHITECTURAL DRAWINGS FOR COLUMN FACING DETAILS.
  2. VERIFY CONDUIT LAYOUT AS SHOWN ON THIS SHEET WITH ELECTRICAL DRAWINGS PRIOR TO PLACEMENT.
  3. TIE-BACKS INSTALLED DURING CONSTRUCTION OF THE WESTLAGE CENTER MAY BE ENCOUNTERED DURING EXCAVATION. SEE SPECIAL PROVISIONS.
  4. SEE SPECIAL PROVISIONS FOR SEQUENCE OF CONSTRUCTION.



KAISER ENGINEERS INC.  
SEATTLE, WASHINGTON

OR ENGINEERING COMPANY  
NSBL GROUP  
ON ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
DEVA/RESOURCE CONSULTANTS  
ANNE STAMONIS & ASSOCIATES, INC.



APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON  
DATE: 8/17/87  
BY: [Signature]

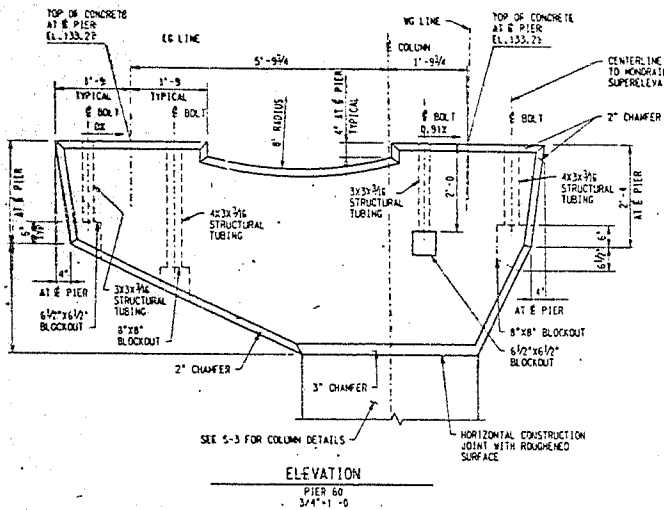
NAME OF INITIALS AND DATE	INITIALS AND DATE
DESIGNED BY: [Signature]	CHECKED BY: [Signature]
DRAWN BY: [Signature]	IN CHARGE: [Signature]
CHECKED BY: [Signature]	REVISIONS:

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

APPROVED: [Signature]  
DATE: 8-18-87

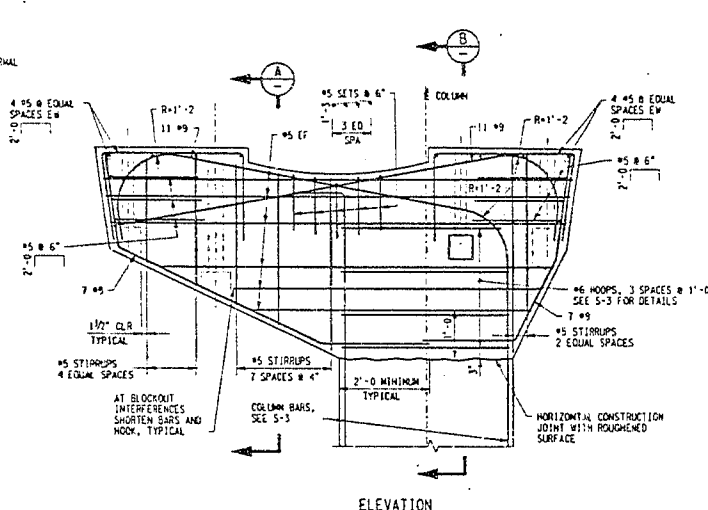
Seattle Monorail Rehabilitation and Upgrading Project  
CONTRACT 4  
by Guideway Relocation

PC S1553A  
762-163  
SHEET 12 OF 26



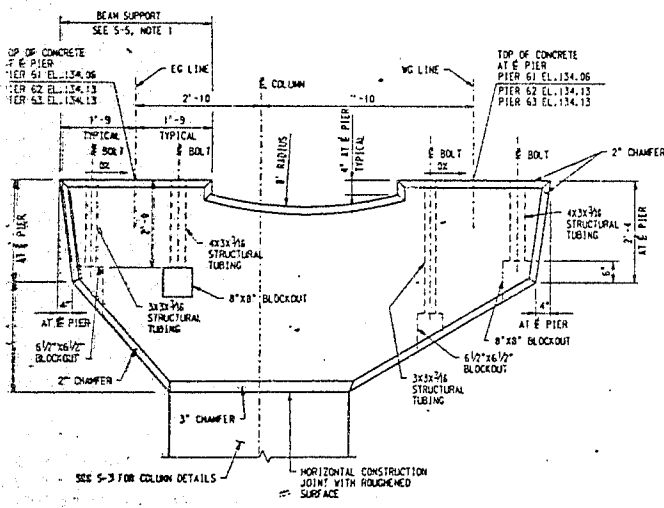
ELEVATION

PIER 60  
3/4"x1'-0"



ELEVATION

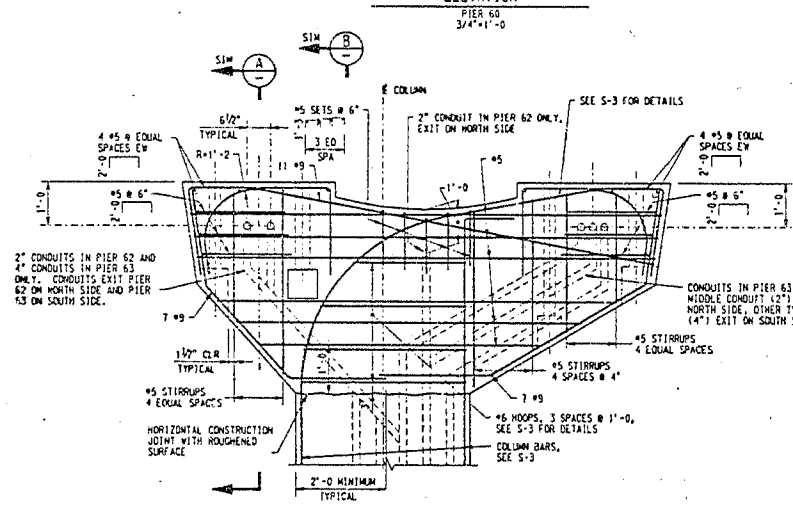
PIER 60  
3/4"x1'-0"



ELEVATION

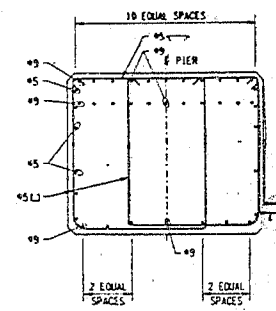
PIERS 61-63  
3/4"x1'-0"

NOTE:  
SEE S-5 TO LOCATE  
CENTERLINE BOLTS

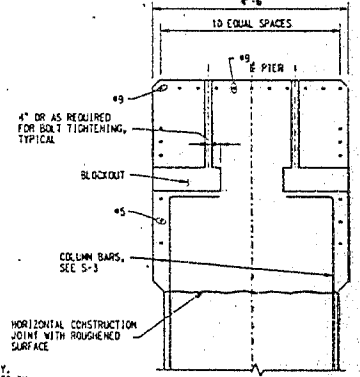


ELEVATION

PIERS 61-63  
3/4"x1'-0"

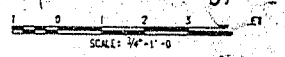


SECTION  
3/4"x1'-0"



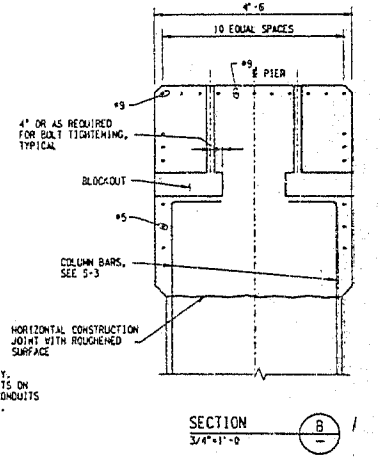
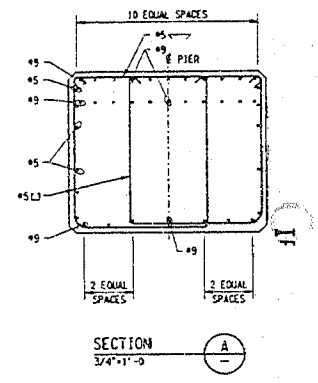
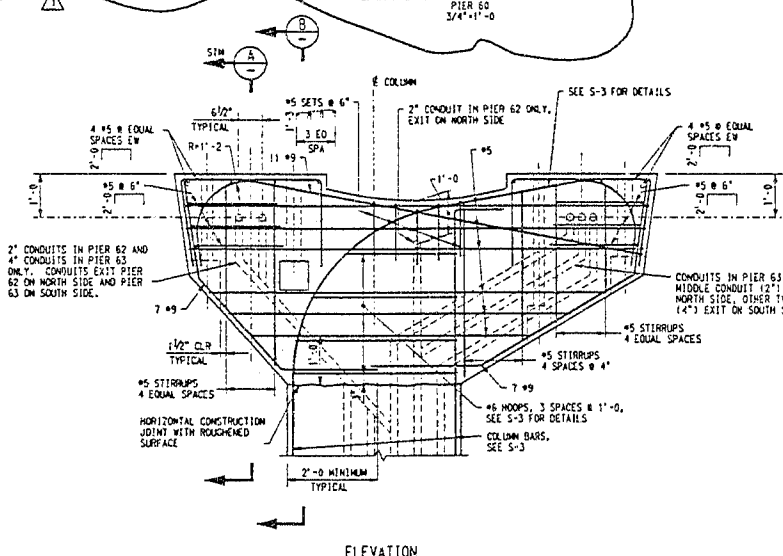
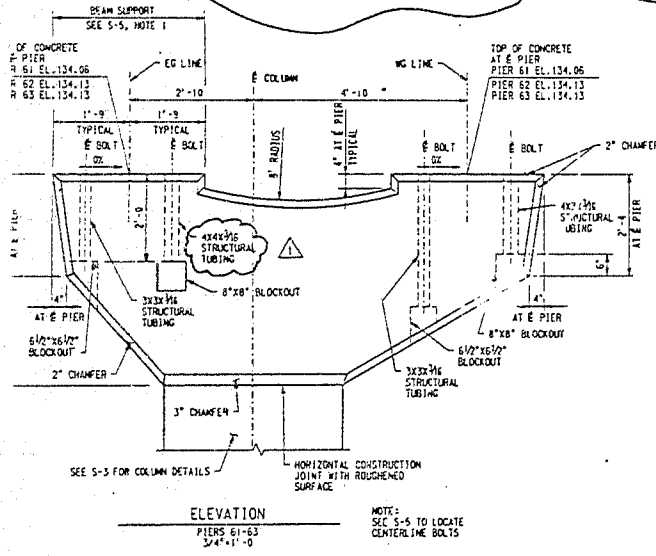
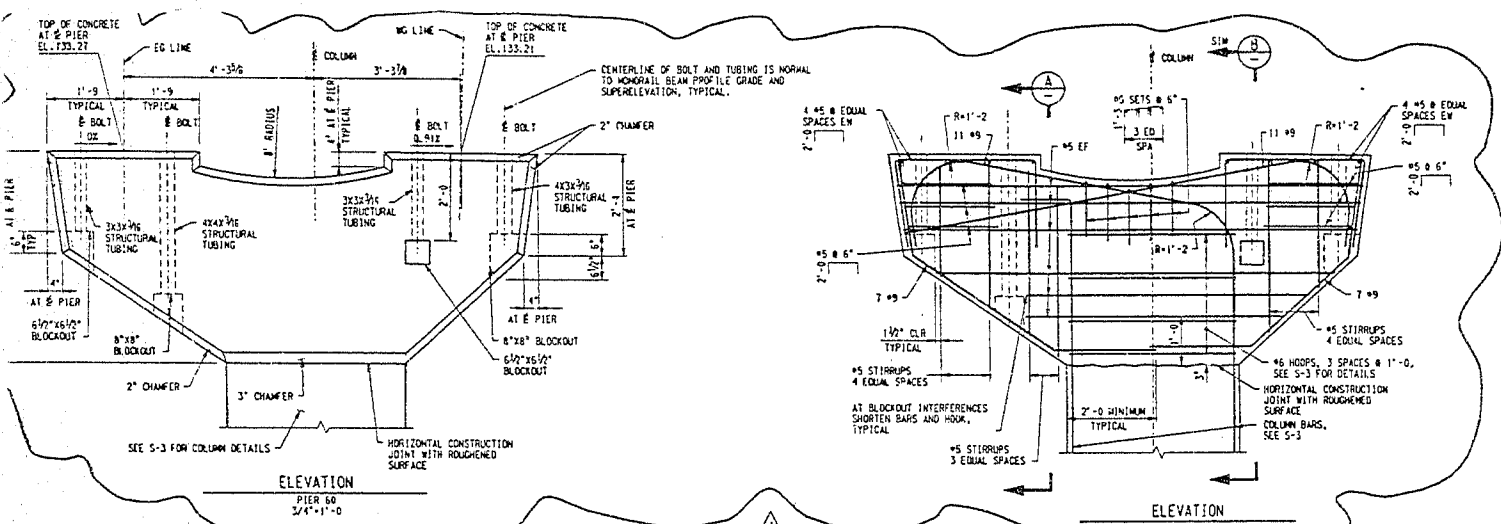
SECTION  
3/4"x1'-0"

- NOTES
1. BLOCKOUTS SHOWN ON THIS SHEET SHALL NOT BE GROUTED.
  2. VERIFY CONDUIT LAYOUT WITH ELECTRICAL DRAWINGS AS SHOWN ON THIS SHEET PRIOR TO PLACEMENT FOR EMBEDDED GROUND WIRE. SEE SHEET 7-2.



PIER CAPS 60-63

KAISER ENGINEERS INC. SEATTLE, WASHINGTON AN ENGINEERING COMPANY NSBU GROUP AN ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON 2/27/92	NAME OR INITIALS AND DATE ELMER G. JONES, 2/27/92 MICHAEL J. JONES, 2/27/92 JAMES J. JONES, 2/27/92 JAMES J. JONES, 2/27/92 JAMES J. JONES, 2/27/92	INITIALS AND DATE [Signature], 2/27/92 [Signature], 2/27/92 [Signature], 2/27/92 [Signature], 2/27/92	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING CHECKED BY: [Signature] DATE: [Signature] SCALE: AS SHOWN	Seattle Manarail Rehabilitation and Upgrading Project. CONTRACT 4 by Guideway Relocation	S-4 S1553A 732 763 SHEET 13 OF 26
		NORTH DENTON & ASSOCIATES, INC. BARBARA LEE LIGHTING DESIGN GEO/RESOURCE CONSULTANTS ANNE STONORS & ASSOCIATES, INC.	ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE CITY OF SEATTLE.	CONTRACT NO. [Blank] DATE: [Blank]	PROJECT NO. [Blank]		



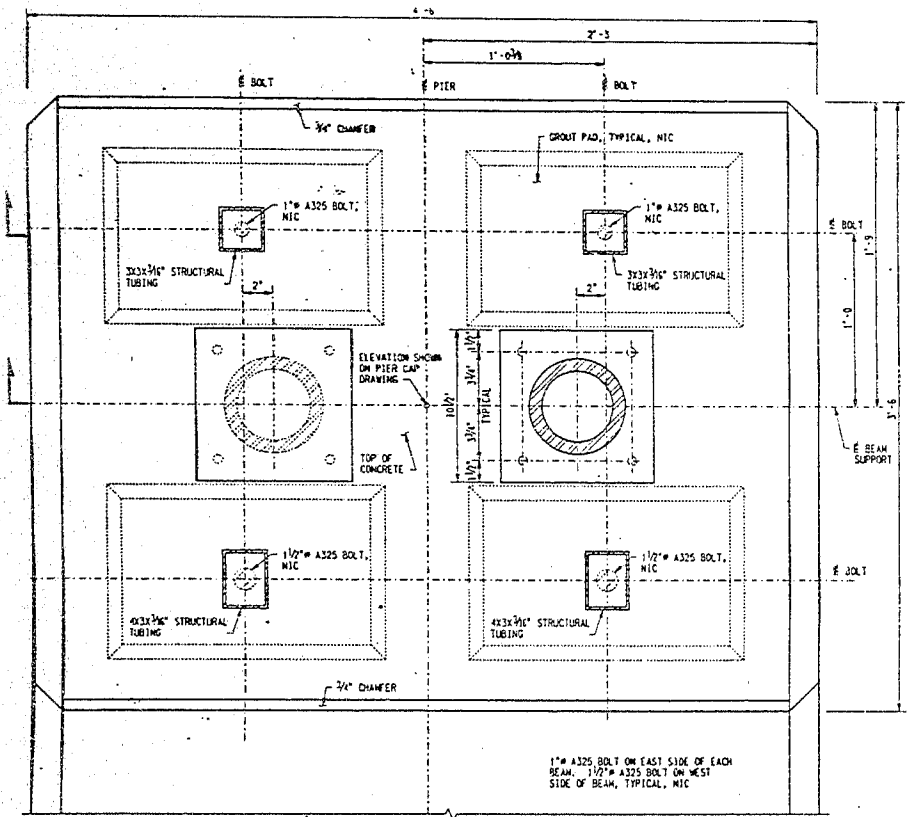
**NOTES**

- BLOCKOUTS SHOWN ON THIS SHEET SHALL NOT BE GROUTED.
- VERIFY CONDUIT LAYOUT WITH ELECTRICAL DRAWINGS AS SHOWN ON THIS SHEET PRIOR TO PLACEMENT FOR EMBEDDED GROUND WIRE, SEE SHEET E-5.

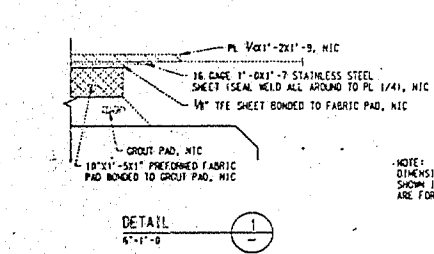
1 0 1 2 3  
SCALE: 3/4"=1'-0"

PIER CAPS 60-63

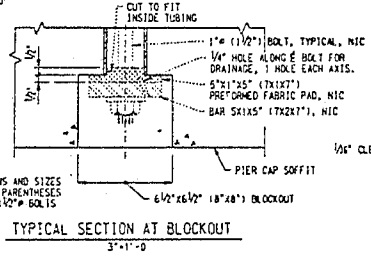
<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON ENGINEERING COMPANY 82 GROUP ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON	NAME OF INTITMS AND DATE REVIEWED BY: J. HORTON DATE: 11/15/81 CHECKED BY: J. HORTON DATE: 11/15/81 DESIGN REVIEW BY: J. HORTON DATE: 11/15/81	INITIALS AND DATE REVIEWED BY: J. HORTON DATE: 11/15/81 CHECKED BY: J. HORTON DATE: 11/15/81 DESIGN REVIEW BY: J. HORTON DATE: 11/15/81	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING APPROVAL NO. 113251 SCALE: N. A. 3/8"=1'-0"	Seattle Monorail Rehabilitation and Upgrading Project CONTRACT 4 by Guideway Relocation	SHEET NO. S1553A DATE: 11/15/81 782-163 SHEET 135 OF 26
		HORTON DENNIS & ASSOCIATES, INC. MARILYN LEE LIGHTING DESIGN GEO/RESOURCE CONSULTANTS ANNE STODOLSKY & ASSOCIATES, INC.	ATTEST: _____ TITLE: _____	PROJECT NO. _____	SUPERVISOR'S SIGNATURE: <i>Supervised Drawing</i>		



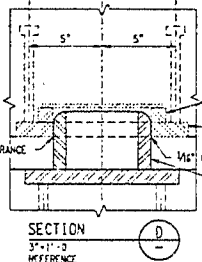
PLAN AT BEARING  
3'-11'-0"



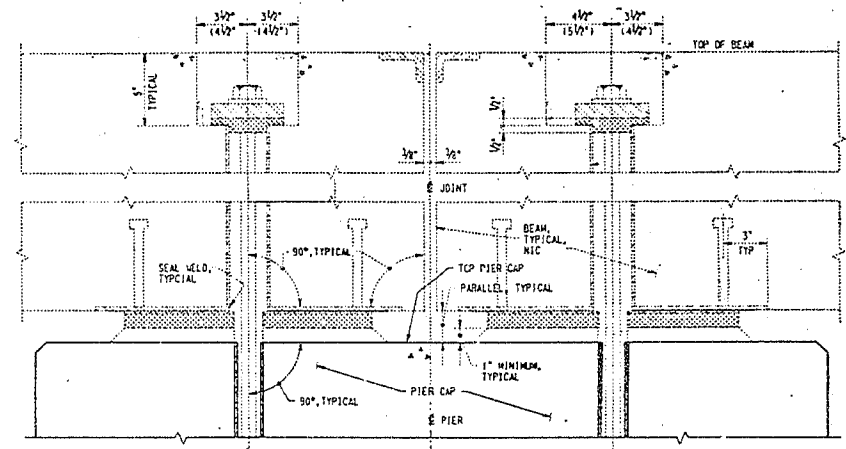
DETAIL  
6'-11'-0"



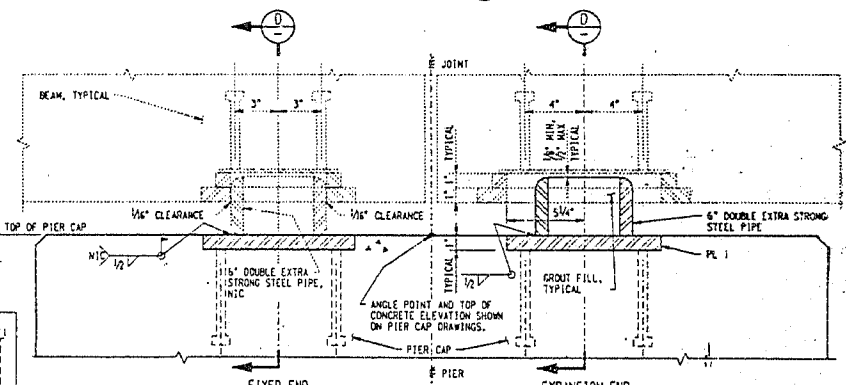
TYPICAL SECTION AT BLOCKOUT  
3'-11'-0"



SECTION  
3'-11'-0" REFERENCE



SECTION  
3'-11'-0"

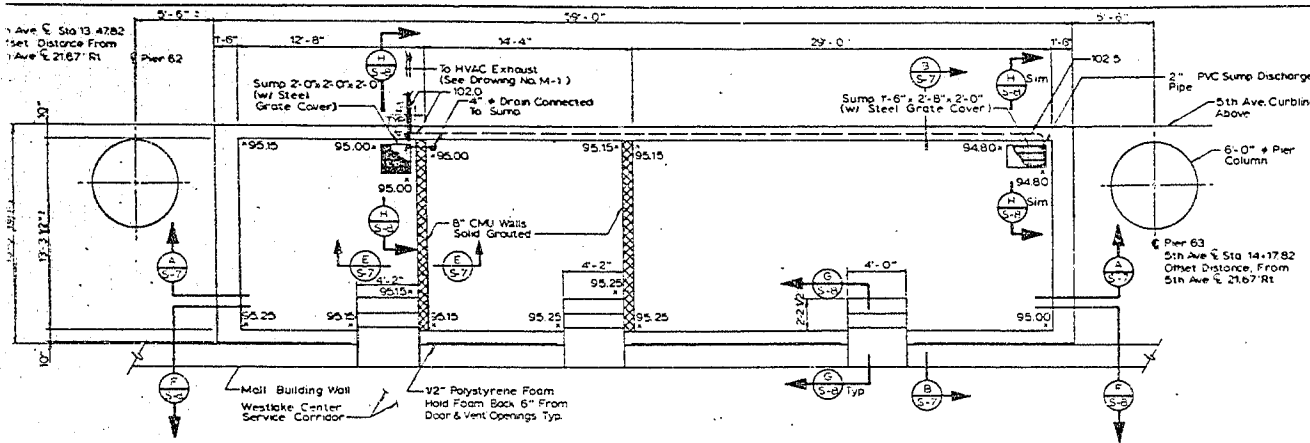


SECTION  
3'-11'-0"

- NOTES
1. TOP OF CONCRETE OF BEAM SUPPORT IS PARALLEL TO THE MONORAIL BEAM PROFILE GRADE IN THE LONGITUDINAL DIRECTION AND PARALLEL TO SUPERELEVATION IN THE LATERAL DIRECTION.
  2. DIMENSIONS SHOWN IN PLAN AT BEARING ARE PARALLEL TO TOP OF CONCRETE BEAM SUPPORT.
  3. MONORAIL BEAMS, FABRIC PAD BEARINGS, GROUT PADS AND BOLTS, NIC ON FIXED END, NIC.

BEARING DETAILS

KAISER ENGINEERS INC. SEATTLE, WASHINGTON ENGINEERING COMPANY HBSU GROUP ASSOCIATES, INC.	NORTHON DEWITT & ASSOCIATES, INC. MARLENE LEE LIGHTING DESIGN GEO/RESOURCE CONSULTANTS ANNE SIMMONS & ASSOCIATES, INC.	APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON 11/21/97	NAME OF PRINTING AND BARE	PRINTING AND DATE	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING APPROVED NO. 113251 SCALE: AS SHOWN	Seattle Monorail Rehabilitation and Upgrading Project CONTRACT 4 by Guideway Relocation	SHEET NO. S1553A
			DESIGN REVIEW	DATE			SHEET 14 OF 26



**STRUCTURAL NOTES:**

**CODE REQUIREMENTS:** All design and construction shall conform to the requirements of the Uniform Building Code, 1984 edition, as amended by the City of Seattle and to the 1984 "Standard Specifications for Road, Bridge, and Municipal Construction WS007 and APWA as amended by the City of Seattle Supplement."

**DESIGN LOADS:** In addition to the dead loads, the following were used for design:  
 Sidewalks 250 psf L.L.  
 Soil Bearing 2500 psf

**SUBMITTALS:** Shop drawings shall be submitted to the engineer prior to any fabrication or construction for all structural items including the following: concrete or masonry reinforcement, embedded steel, steel, metal grating.

**INSPECTION:** Inspection by an approved testing lab shall be performed for masonry, reinforcement placement, concrete placement. All prepared soil-bearing surfaces shall be inspected prior to placement of reinforcing steel. Soils compaction shall be supervised by an approved testing lab.

**SPECIAL CONDITIONS:** Contractor shall verify all dimensions in the field and shall provide marking and staking of all structural members during construction. Contractor shall verify placement of all field changes prior to installation of fabrication.

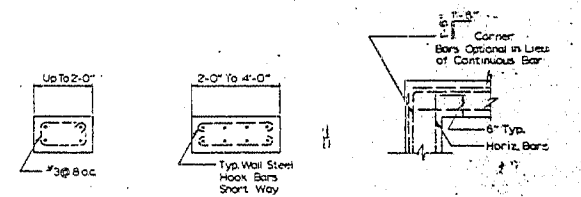
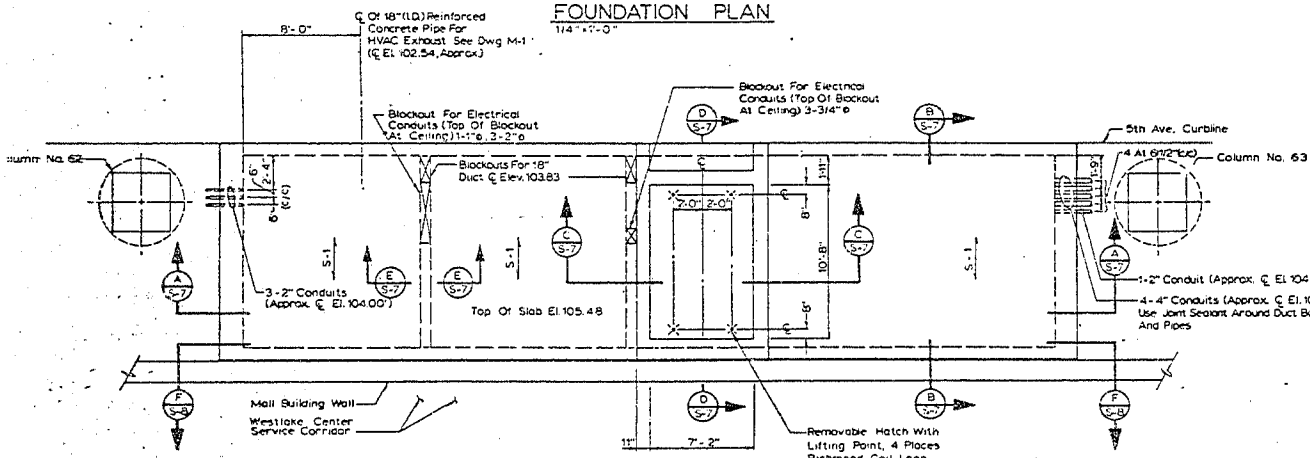
**SOILS:** All design work has been based upon the recommendations of the Geo/Resource Consultants' soils report, "Geotechnical Investigation Report, Westlake Station Relocation, Monorail Rehabilitation/Upgrade".

**CONCRETE:** Concrete work shall conform to USC Chapter 26 and shall be Class AX unless otherwise specified. A water-reducing admixture conforming to USC Standard No. 267, used in strict accordance with the manufacturer's recommendations, shall be incorporated in concrete design mixes. Maximum water content when using air entraining agent shall be 6 Gal/94 lbs. Cement.

**REINFORCING STEEL:** shall be in accordance with ASTM A-615, Grade 60. Bars in beams and slabs shall be supported as specified by the CSI 902-1-76. Reinforcing steel shall be detailed in accordance with ACI 315-74.

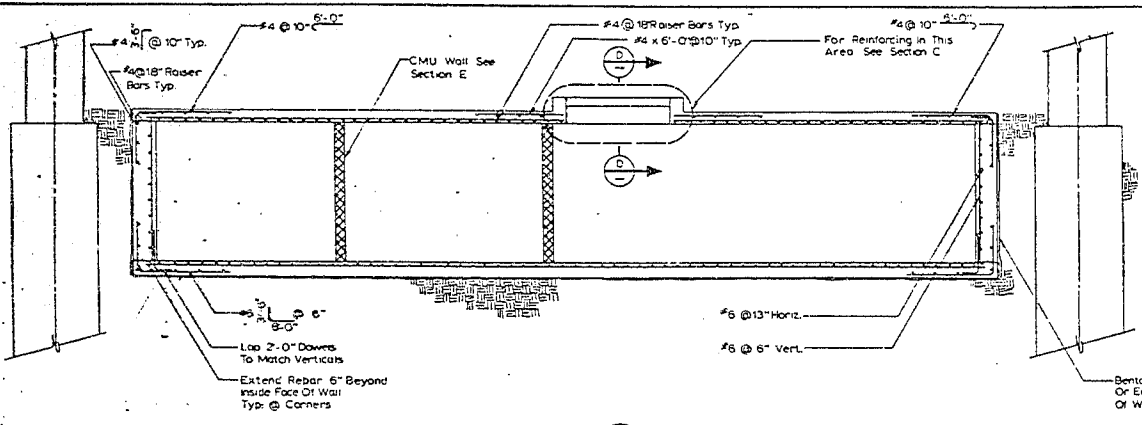
Use	Cover
Beams	1-1/2" (to stirrups or ties)
Slab Bars	3/4"
Wall Bars: Interior Faces	3/4"
Exposed to weather	1-1/2" (#5 and smaller)
OR Earth	3" (#6 and larger)
Footing Bars	3"

**CONCRETE MASONRY:** All concrete masonry units shall be 2" = 1350 psi, Grade N-1.  
**MORTAR:** shall be Type S and conform to USC 2402 and 2403 and as designated in the Specifications.  
**MASONRY GROUT:** Grout shall conform to USC Section 2402 and 2403. Grout shall be poured in maximum lifts of 5'-0". All cells containing vertical bars and all bond beams shall be filled with grout.  
**MASONRY REINFORCING STEEL:** Reinforcing steel shall be Grade 60.  
**STEEL SPECIFICATIONS:** Fabrication and erection shall be in accordance with the following specifications:  
 Structural Steel - AISC-Specification for the Design, Fabrication and Erection of Structural Steel for Buildings - 8th Edition  
 Welding - AWS D1.1 Rev. 2-83  
 Welder Certif. - Washington Association of Building Officials (WABO)  
**STEEL MATERIALS:** - ASTM A36. All exposed steel shall be galvanized.

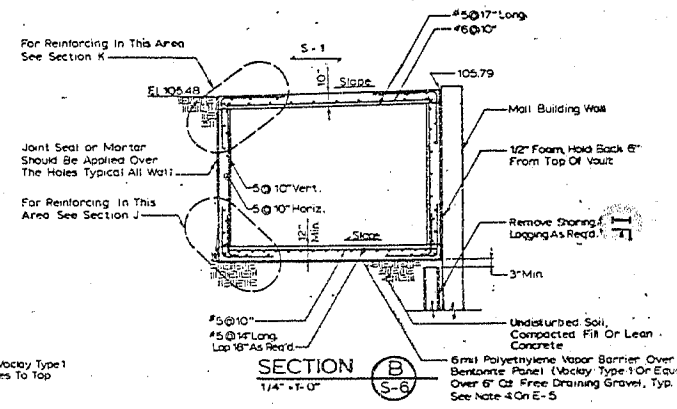


**Vault Plan And Notes**

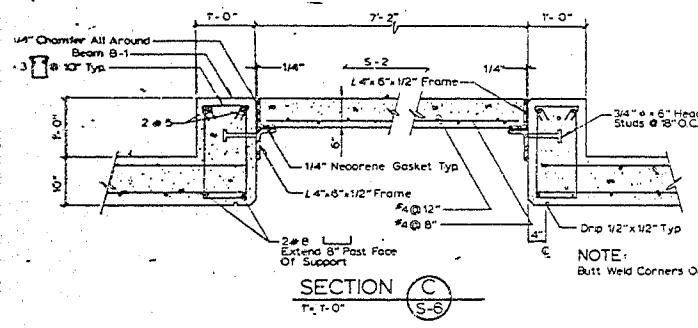
<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON DOOR ENGINEERING COMPANY "THE H&L GROUP" CON ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON 11/19/87	NAME OF INITIALS AND DATE REVIEWED: [Signature] 11/19/87 DESIGNED: [Signature] DRAWN: [Signature] CHECKED: [Signature]	INITIALS AND DATE REVIEWED: [Signature] 11/19/87 DESIGNED: [Signature] DRAWN: [Signature]	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING APPROVED: [Signature] SCALE: 1/4" = 1'-0"	Seattle Monorail Rehabilitation and Upgrading Project <b>CONTRACT 4</b> By Guideway Relocation	PC S1853A SHEET 15 OF 26 782-63
		HORTON DENNIS & ASSOCIATES, INC. WASHINGTON LEE LIGHTING DESIGN GEO/RESOURCE CONSULTANTS ANNE SIMMONS & ASSOCIATES, INC.	PROJECT NO.	SHEET TITLE	REVIEWED AS NOTED	PROJECT NO.	SHEET TITLE



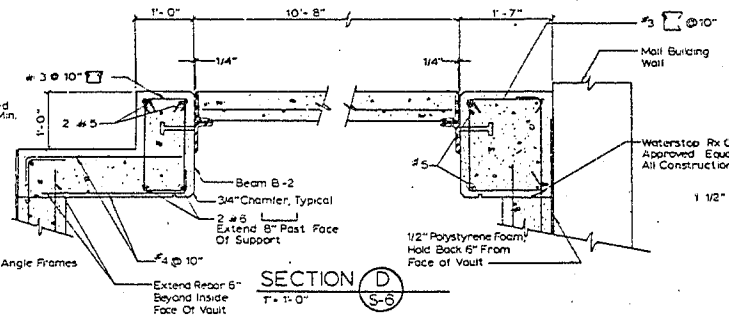
SECTION A  
1/4" x 1'-0"



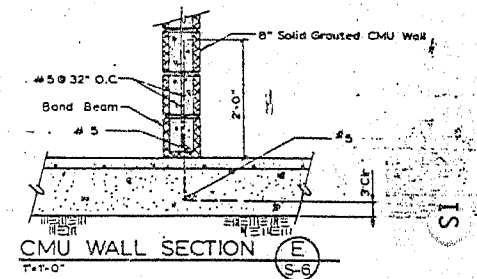
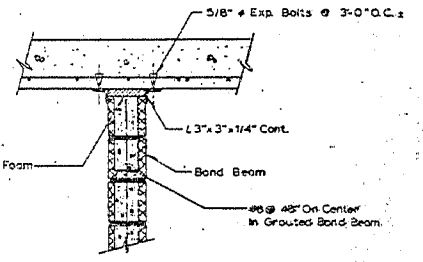
SECTION B  
1/4" x 1'-0"



SECTION C  
1" x 1'-0"



SECTION D  
1" x 1'-0"



CMU WALL SECTION E  
1" x 1'-0"

Vault Sections

S-

**Kaiser Engineers Inc.**  
SEATTLE, WASHINGTON

CON ENGINEERING COMPANY  
E H&J GROUP  
CON ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEO-RESOURCE CONSULTANTS  
ANNE STANBOS & ASSOCIATES, INC.

APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

DATE BY INITIALS AND DATE

DESIGNED BY: G.A. CLAPPINE  
CHECKED BY: [Signature]  
REVISIONS: [Signature]

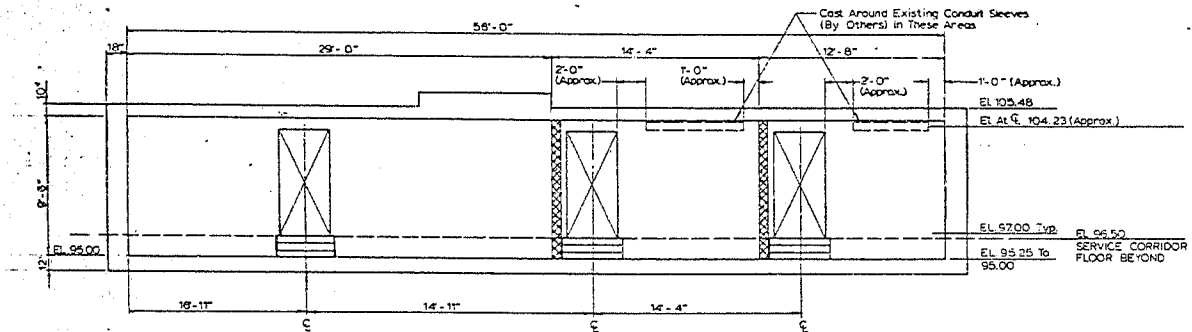
THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

REVISIONS BY: [Signature]  
DATE: [Signature]  
SCALE: AS NOTED

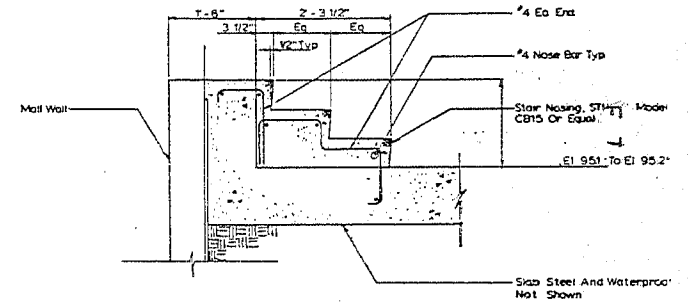
Seattle Monorail Rehabilitation and Upgrading Project

CONTRACT 4  
By Guideway Relocation

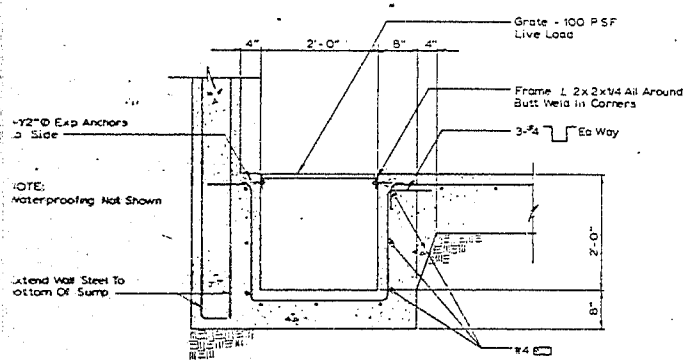
NO. S1929A  
782-163  
PAGE 16 OF 2



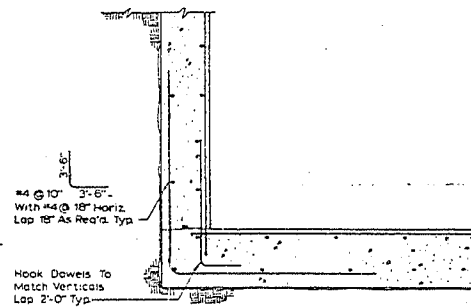
SECTION **F**  
1/4" = 1'-0"



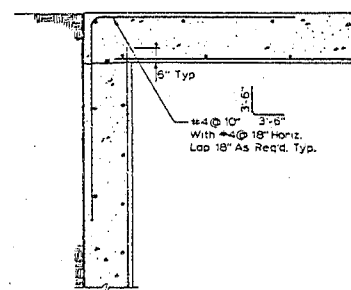
SECTION **G**  
1" = 1'-0"



SECTION **H**  
1" = 1'-0"



SECTION **J**  
1" = 1'-0"



SECTION **K**  
1" = 1'-0"

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

KAISER ENGINEERING COMPANY  
F. HSBY GROUP  
CON ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEORGE GARDNER CONSULTANTS  
ANNE STYMONS & ASSOCIATES, INC.



APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

DATE: 11/18/2011

NAME OR INITIALS AND DATE	INITIALS AND DATE
DESIGNED BY: [Signature]	REVIEWED BY: [Signature]
DRAWN BY: [Signature]	CHECKED BY: [Signature]
DATE: 11/18/2011	DATE: 11/18/2011
PROJECT NO. [Blank]	PROJECT NO. [Blank]

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

APPROVED BY: [Signature]

Vault Wall Elevation & Sections | S-

Seattle Monorail Rehabilitation and Upgrading Project

CONTRACT 4  
By Guideway Relocation

PC 51553A  
782-163  
SHEET 17 OF 22



### WIRE LEGEND

- TRANSFORMER, VOLTAGE AND RATING INDICATED AS APPLICABLE
- OVERLOAD RELAY HEATER
- MAGNETIC STARTER WITH NEMA SIZE INDICATED
- CIRCUIT BREAKER, TRIP SHOWN, 3 POLE UNLESS OTHERWISE NOTED
- FUSE SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE UNLESS OTHERWISE NOTED
- SWITCH, CURRENT RATING INDICATED, 3 POLE UNLESS OTHERWISE NOTED
- CONNECTOR OR DRAWOUT ASSEMBLY
- FUSE
- METER & SWITCH, SCALE INDICATED
- METER SOCKET FOR UTILITY SUPPLIED METER
- GROUND

### CONDUIT AND RACEWAY LEGEND

- CONDUIT, DESTINATION SHOWN, CIRCUIT NUMBERS IN PARENTHESES, SEE PANEL SCHEDULE. ARROW DOES NOT ALWAYS POINT TO PANEL.
- EXPOSED CONDUIT AND CONDUCTORS \*
- UNDERGROUND CONCRETE ENCASED ELECTRICAL DUCTBANK, SIZE AND NUMBER OF DUCTS AS DETAILED.
- UNDERGROUND CONCRETE ENCASED ELECTRICAL DUCTBANK TURNING DOWN OR AWAY FROM VIEWER.
- UNDERGROUND CONCRETE ENCASED ELECTRICAL DUCTBANK TURNING UP OR TOWARDS THE VIEWER.
- EMBEDDED CONDUIT DOWN OR AWAY FROM VIEWER.
- EMBEDDED CONDUIT UP OR TOWARDS VIEWER.
- EMBEDDED CONDUIT EXPANSION/DEFLECTION FITTING (CRUCSE-HINDS TYPE XD)
- CONCEALED CONDUIT

### LIGHTING LEGEND

- PHOTOCELL LIGHT CONTROLLER
- EXIT LIGHT WITHOUT BATTERY BACKUP
- EXIT LIGHT WITH BATTERY BACKUP. SEE SCHEDULE.
- ILLUMINATED EXIT SIGN. SEE SCHEDULE.
- LUMINAIRE ON EMERGENCY CIRCUIT
- FLUORESCENT LUMINAIRE TO SCALE. SEE SCHEDULE. S = CIRCUIT NUMBER WHERE SHOWN.
- LIGHTING FIXTURE, CURRENT RATING INDICATED, NEMA 1 ENCLOSURE UNLESS OTHERWISE INDICATED. SEE CONTROL DIAGRAM FOR NUMBER OF POLES.
- LUMINAIRE IDENTIFICATION: A = FIXTURE, B = NO. OF LAMPS, C = WATTS PER LAMP
- EMERGENCY BATTERY OPERATED INCANDESCENT LUMINAIRE.
- WALL SWITCH: 2 = DOUBLE POLE, 3 = THREE POLE, 4 = FOUR POLE, M = MANUAL MOTOR STARTER, P = PILOT LIGHT, K = KEY OPERATOR, D = DIMMER, V = WEATHERPROOF, T = TIMER.

### POWER LEGEND

- CONNECTION POINT TO EQUIPMENT SPECIFIED, FURNISHED AND INSTALLED UNDER OTHER SECTIONS. RACEWAY, CONDUCTORS AND CONNECTIONS IN THIS SECTION.
- CONVENIENCE RECEPTACLE - SINGLE
- CONVENIENCE RECEPTACLE - DUPLEX UNLESS OTHERWISE NOTED. (WP = WEATHERPROOF, C = CLOCK HANGER, SFI = GROUND FAULT INTERRUPTOR)
- MOTOR SQUIRREL CAGE INDUCTION, HP INDICATED
- GENERAL ELECTRICAL CONTROL OR WIRING DEVICE, NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED. LETTERS, SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE.
- PUSH-BUTTON STATION, NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED (VP = NEMA 4X ENCLOSURE) SEE CONTROL DIAGRAM OR SCHEDULES FOR TYPE PUSH-BUTTON REQUIRED.
- NON-FUSED DISCONNECT SWITCH, SIZE INDICATED, 3 POLE UNLESS OTHERWISE NOTED, NEMA 1 ENCLOSURE, WP = WEATHERPROOF, (NEMA 4X)
- BRANCH CIRCUIT PANEL
- MAIN ELECTRICAL COMPONENT OR DEVICE, NAMEPLATE OR IDENTIFYING SYMBOL AS SHOWN

### SYSTEMS AND COMMUNICATIONS LEGEND

- SPRECKELS BACK BOX AND GRILL, CEILING MOUNT FLUSH.
- TELEPHONE RECEPTACLE, FLUSH IN WALL (OUT-LET BOX ONLY).
- TELEPHONE TERMINAL BOARD

### FIRE ALARM LEGEND

- FIRE ALARM ANNUNCIATOR PANEL
- FIRE ALARM HORN
- FIRE ALARM BELL
- FIRE ALARM MANUAL PULL STATION

- FIRE ALARM MASTER PANEL
- FIRE ALARM TAMPER SWITCH
- FIRE ALARM HEAT DETECTOR
- FIRE ALARM FLOW SWITCH
- FIRE ALARM SMOKE DETECTOR
- FIRE ALARM IONIZATION SMOKE DETECTOR
- MOTION DETECTOR

### SCHEMATIC LEGEND

- INDICATING LIGHT, LETTER INDICATES COLOR.
- INDICATING LIGHT, LETTER INDICATES COLOR. PUSH TO START. A = AMBER, D = BLUE, C = CLEAR, G = GREEN, R = RED, W = WHITE
- CONTROL RELAY COIL
- PUSH-BUTTON SWITCH MOMENTARY CONTACT NORMALLY OPEN
- PUSH-BUTTON SWITCH MOMENTARY CONTACT NORMALLY CLOSED.
- SELECTOR SWITCH MAINTAINED CONTACT CHART DEFINES OPERATION. X = CLOSED CONTACT, O = OPEN CONTACT
- ASTERISK DENOTES DEVICE REMOTE
- CONTACT, NORMALLY OPEN W/ NEMA SIZE INDICATED AS APPLICABLE.
- CONTACT, NORMALLY CLOSED W/ NEMA SIZE INDICATED AS APPLICABLE.
- LIGHT SWITCH SHOWN NORMALLY CLOSED.

CKT	POSITION	
	WAND	OFF (AUTO)
1	X	O
2	O	X

### DRAWING CONVENTIONS

- SECTION TITLE UNDERLINE E2: REFERENCE WHERE SECTION IS TAKEN.
- DETAIL TITLE UNDERLINE E15: REFERENCE WHERE DETAIL IS TAKEN.
- NORTH ARROW
- NOTE**  
ROOM NUMBER, NAMEPLATE IDENTIFICATION TAG  
EQUIPMENT OR RACEWAY IDENTIFICATION NUMBER, SEE SCHEDULE.

### ABBREVIATIONS

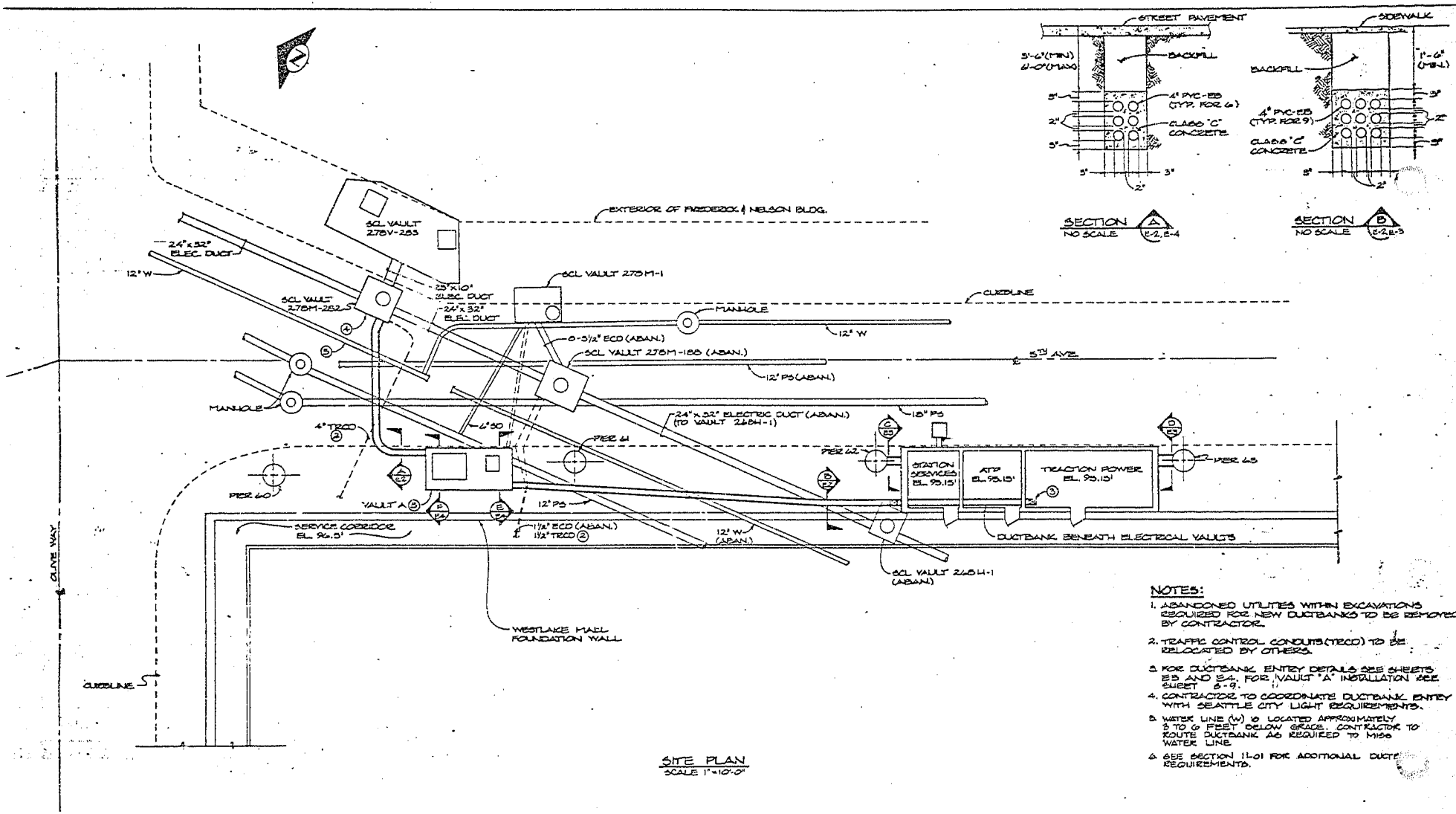
A AMPERE	AF AMPERE FUSE	AFV ABOVE FINISHED FLOOR	ANW ANNUNCIATOR	AS AMPERE SENSOR	AT AMPERE TRIP	ATS AUTOMATIC TRANSFER SWITCH	C CIRCUIT BREAKER	CAF CURRENT LIMITING	CAF FUSE	CAF CONTROL PANEL	CAF CONTROL POWER TRANSFORMER	CR CONTROL RELAY	CAS PVC COATED RIGID STEEL CONDUIT	CS CONTROL STARTER	CT CURRENT TRANSFORMER	CU COPPER	D DIMMER	DC DIRECT CURRENT	UH UH	E EMPFF	EF EXHAUST FAN	ELEC ELECTRICAL	ELEV ELEVATION	EMF ELECTROSTATIC	EMF TUNING	EP ESTERSON PROOF	F, FU FUSE	FAP FIRE ALARM PANEL	FR FRAMING CHANNEL	FR FEEDER	FS FLOW SWITCH	GA GAGE	GALV GALVANIZED	GF GROUND FAULT INTERRUPTER	GRS GALVANIZED RIGID STEEL	HP HANDPOWER	IC INTERRUPTING CAPACITY	J, JB JUNCTION BOX	KCM THOUSAND CIRCULAR MILS	KV (KILOVOLTS)	KVAR (KILOWATT)	LC LIGHTING CONTACTOR	LS LIMIT SWITCH	M MAGNETIC CONTACTOR	COIL	MCC MOTOR CONTROL CENTER	M MAGNOLIE	MS MOTOR STARTER	NEUT NEUTRAL	NO NORMALLY OPEN	NP NAMEPLATE	OP OPER	P PANEL	PS PUSH-BUTTON	PC PHOTOCELL, POWER CABLE	PCU POWER CONDITIONING UNIT	PH PHASE	PT POTENTIAL TRANSFORMER	PC POLYVINYL CHLORIDE	RE REMOTE INDICATOR	RPC REMOTE POWER CENTER	SD SMOKE DETECTOR	SW SWITCH	T THERMOSTAT	TRM TIME DELAY RELAY	TRM TRISTYLE	TTB TELEPHONE TERMINAL BOARD	UPS UNINTERRUPTABLE POWER SUPPLY	UN UNDERGROUND	UH UNIT HEATER	VP WEATHERPROOF	YP YIELD	W WIRE	WP WEATHERPROOF TRANSFORMER
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### NOTES

- THIS IS A STANDARD LEGEND SHEET, THEREFORE SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

### ELECTRICAL LEGEND

<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON  AN ENGINEERING COMPANY 4001 GROUP W ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS	NAME AND INITIALS AND DATE DESIGNED BY: [Signature] DATE: 11/19/73	INITIALS AND DATE CHECKED BY: [Signature] DATE: 11/19/73	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING	Seattle Monorail Rehabilitation and Upgrading Project	SHEET NO. 782-63
		ATTEST: [Signature]	ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF SEATTLE SPECIFICATIONS TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, AS AMENDED BY THE BOARD OF PUBLIC WORKS, AND APPROVED BY THE BOARD OF PUBLIC WORKS.	PROJECT NO. 113351	CONTRACT NO. 4	By Guideway Piers and Vaults	DATE 19 73



**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

JOOP ENGINEERING COMPANY  
HE NEELY GROUP  
LGM ASSOCIATES, INC.

HORTON DENNIS & ASSOCIATES, INC.  
WARREN LEE LIGHTING DESIGN  
GEO/RESOURCE CONSULTANTS  
ANNE STAMAND & ASSOCIATES, INC.



APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC UTILITIES  
SEATTLE, WASHINGTON

DATE: 12/19/07

NAME OF OFFICE AND DATE  
OFFICE: R. C. YOUNG  
DATE: 12/19/07

NAME: ALEXANDER  
DATE: 12/19/07

NAME: R. C. YOUNG  
DATE: 12/19/07

INITIALS AND DATE

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

CONTRACT NO. 115351

PROJECT NO. 783-63

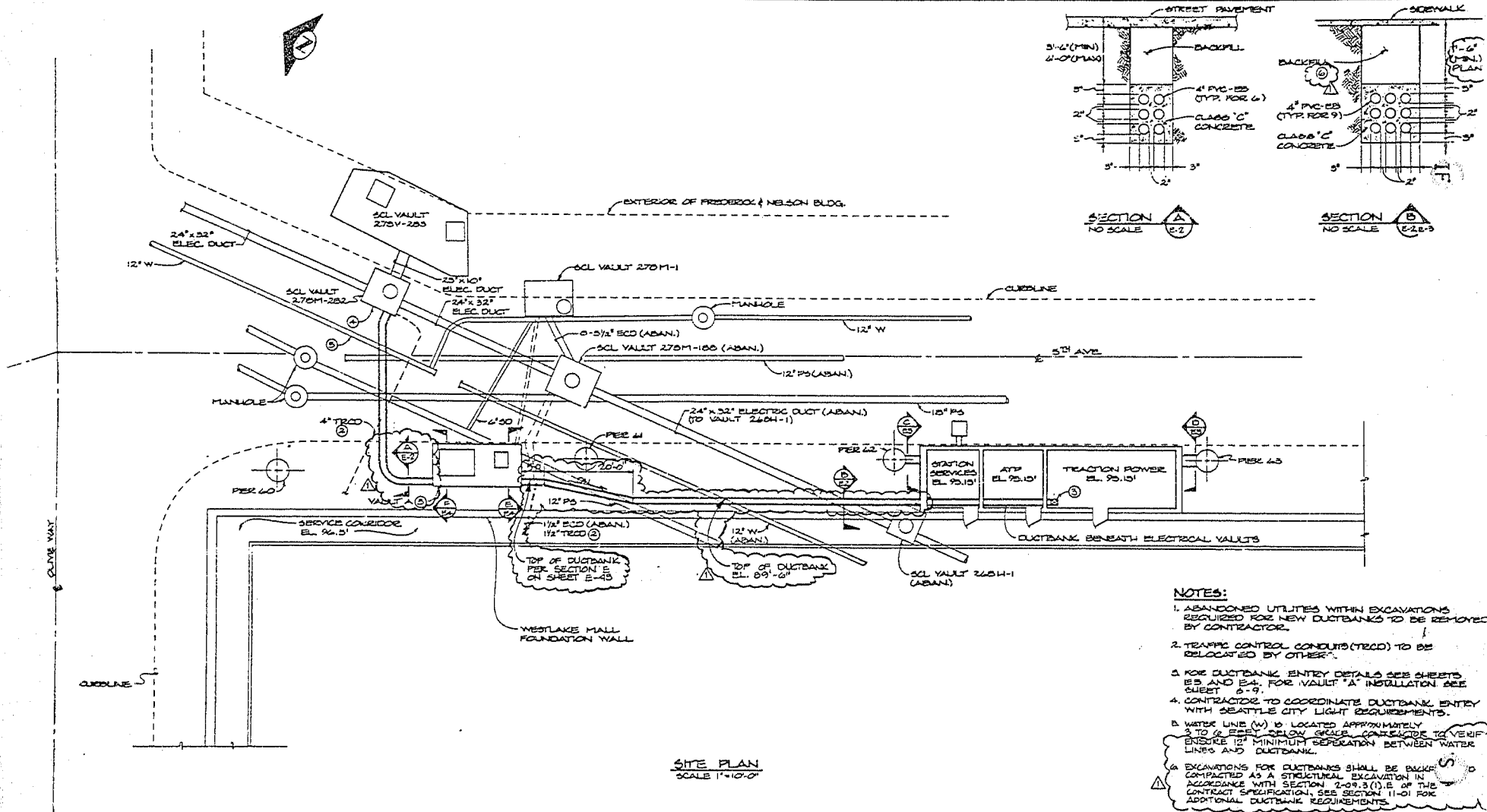
**ELECTRICAL SITE PLAN** E-

Seattle Monorail Rehabilitation and Upgrading Project

Contract 4

By Guideway Piers and Vaults

PC 81553A  
8/07  
SHEET 13 OF 23  
783-63  
SHEET 13 OF 23



**SITE PLAN**  
SCALE 1"=10'-0"

**ELECTRICAL SITE PLAN** E-2

**KAISER ENGINEERS INC.**  
SEATTLE, WASHINGTON

OR ENGINEERING COMPANY  
HOKU GROUP  
DM ASSOCIATES, INC.

NORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEO/RESOURCE CONSULTANTS  
ANNE STRONG & ASSOCIATES, INC.



APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

DATE: 11/19/01

ADDRESS: [REDACTED]

NAME OR INITIALS AND DATE	INITIALS AND DATE
DESIGNED BY: [REDACTED]	APPROVED BY: [REDACTED]
DRAWN BY: ALEXANDER	CHECKED BY: [REDACTED]
CALCULATED BY: [REDACTED]	REVIEWED BY: [REDACTED]

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

PROJECT NO. 113351

DATE: 11/19/01

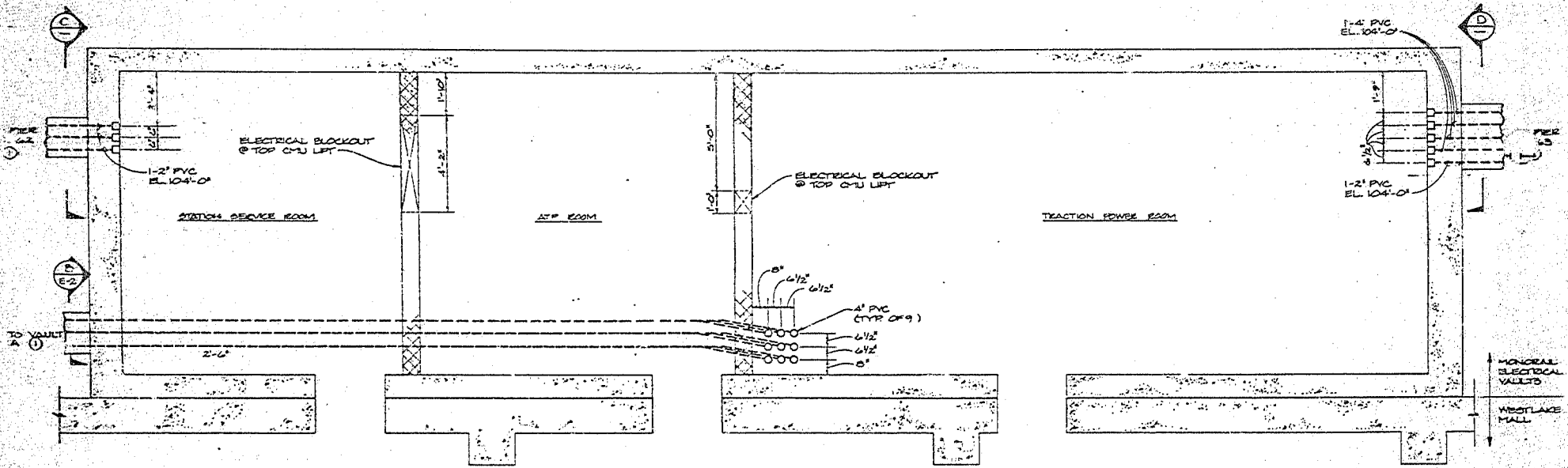
SCALE: 1"=10'-0"

Seattle Monorail Rehabilitation and Upgrading Project

Contract 4  
By Guideway Piers and Vaults

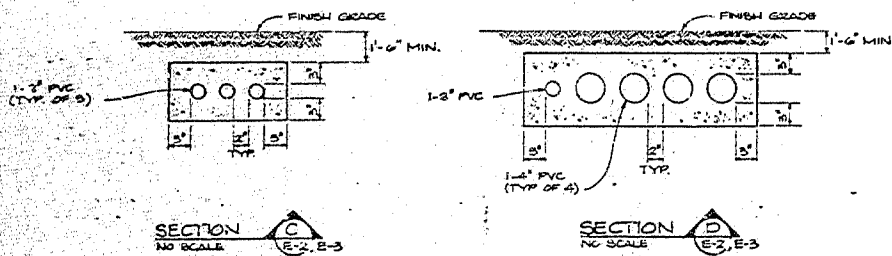
PROJECT PLAN NO. 782-145  
SHEET 205 OF 212

*Supplemental Drawing*



EMBEDDED CONDUIT PLAN - EL. 98.15'  
SCALE: 1/2" = 1'-0"

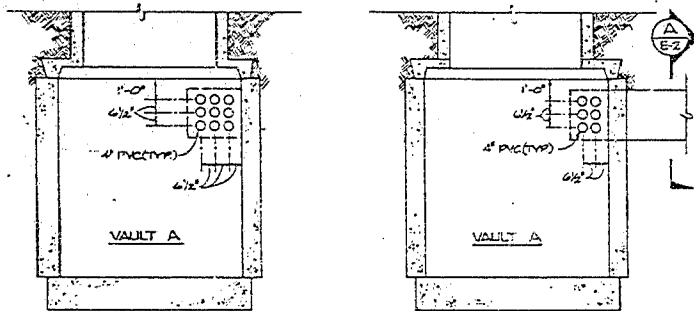
**NOTES**  
1. ALL ELEVATIONS OF CONDUITS ARE TO CENTERLINE OF CONDUIT.



S1H

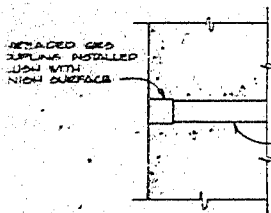
EMBEDDED CONDUIT LAYOUT

KAISER ENGINEERS, INC. SEATTLE, WASHINGTON COP. ENGINEERING COMPANY MESA GROUP CON ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON TESTED: [Signature] PROJECT NO. 113351	NAME OF ARTICLES AND DATE DRAWN: [Signature] CHECKED: [Signature] DESIGN REVIEW: [Signature]	INITIALS AND DATE DESIGNED: [Signature] CHECKED: [Signature] REVIEWED: [Signature]	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING PROJECT NO. 113351 SCALE: 1/2" = 1'-0"	Seattle Monorail Rehabilitation and Upgrading Project Contract 4 By Guideway Piers and Vaults	PK. S1853A SHEET NO. 782-135 SHEET 21 OF 2
			HORTON DENNIS & ASSOCIATES, INC. MARLENE LEE LIGHTING DESIGN GEORGE SMOKE CONSULTANTS ANNE SIMMONS & ASSOCIATES, INC.	PROJECT NO. 113351 SHEET NO. 21 OF 2			

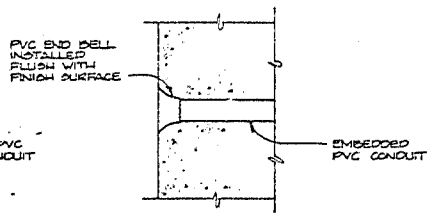


SECTION E  
NO SCALE

SECTION F  
NO SCALE



EMBEDDED CONDUIT TERMINATION ①  
NO SCALE



EMBEDDED CONDUIT TERMINATION ②  
NO SCALE

NOTES

1. TYPICAL AT ALL LOCATIONS EXCEPT DUCTBANK ENTRY INTO VAULT A, VAULT 278-M-202 AND TRACTION POWER ROOM. (DUCTBANK FROM VAULT A, ONLY)
2. TYPICAL AT DUCTBANK ENTRY INTO VAULT A, VAULT 278-M-202 AND TRACTION POWER ROOM.

KAISER ENGINEERS INC.  
SEATTLE, WASHINGTON

FOR ENGINEERING COMPANY  
T. HUBB GROUP  
SON ASSOCIATES, INC.

MORTON DENNIS & ASSOCIATES, INC.  
MARLENE LEE LIGHTING DESIGN  
GEORGE/RESOURCE CONSULTANTS  
AND SYMONS & ASSOCIATES, INC.



APPROVED FOR ADVERTISING  
BY THE BOARD OF PUBLIC WORKS  
SEATTLE, WASHINGTON

ATTEST:

NAME OF INITIALS AND DATE	INITIALS AND DATE
DESIGNED BY: <i>Ref</i>	CHECKED BY: <i>Ref</i>
DRAWN BY: <i>Ref</i>	SCALE: <i>Ref</i>
DATE: <i>Ref</i>	REVISIONS:
BY: <i>Ref</i>	DATE: <i>Ref</i>
BY: <i>Ref</i>	DATE: <i>Ref</i>

THE CITY OF SEATTLE  
DEPARTMENT OF ENGINEERING

ORDINANCE NO. 113501 - APPROVED

DATE: *Ref*

SCALE: *Ref*

CONDUIT DETAIL

Seattle Monorail Rehabilitation and Upgrading Project

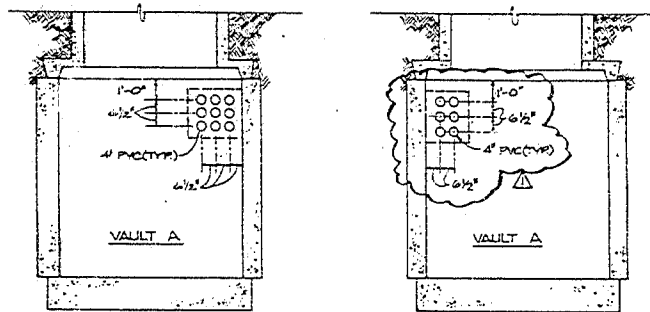
Contract 4

By Guideway Piers and Vaults

9553A

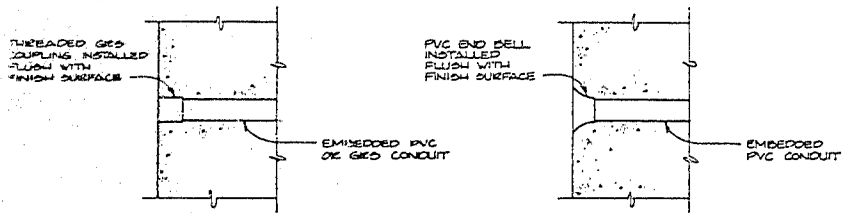
782163

22



SECTION E  
NO SCALE

SECTION F  
NO SCALE



EMBEDDED CONDUIT TERMINATION ①  
NO SCALE

EMBEDDED CONDUIT TERMINATION ②  
NO SCALE

**NOTES**

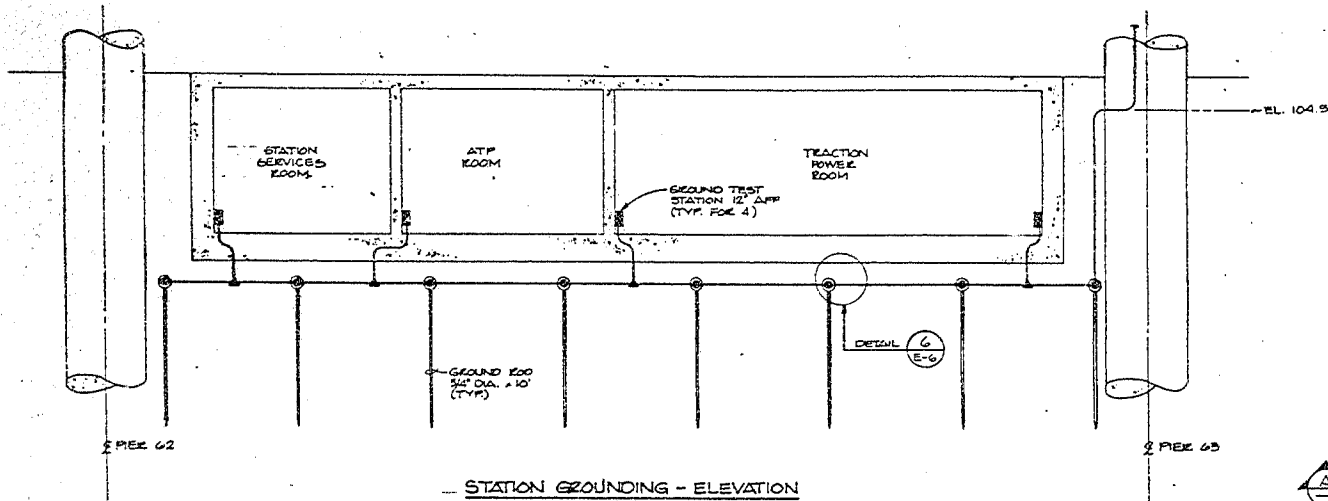
1. TYPICAL AT ALL LOCATIONS EXCEPT DUCTBANK ENTRY INTO VAULT A, VAULT 278-M-282 AND TRACTION POWER ROOM. (DUCTBANK FROM VAULT "A" ONLY)
2. TYPICAL AT DUCTBANK ENTRY INTO VAULT A, VAULT 278-M-282 AND TRACTION POWER ROOM.

CONDUIT DETAIL

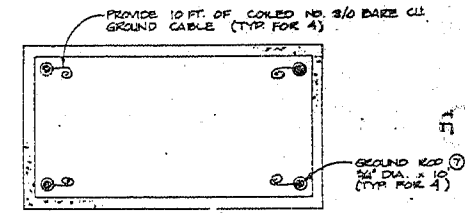
E-4

KAISER ENGINEERS INC. SEATTLE, WASHINGTON  OOR ENGINEERING COMPANY 6 WEST GROUP COB ASSOCIATES, INC.  HORTON DENNIS & ASSOCIATES, INC. MARLENE LEE LIGHTING DESIGN COURTESOURCE CONSULTANTS ANNE STANOS & ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON	NAME OF INITIALS AND DATE DESIGNED: <i>R. J. [Signature]</i> CHECKED: <i>[Signature]</i> DRAWN: <i>[Signature]</i> DATE:	INITIALS AND DATE REVIEWED: <i>[Signature]</i> DATE:	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING  FINANCE NO. 113351 SCALE: 1" = 1'-0"	Seattle Monorail Rehabilitation and Upgrading Project  Contract 4 By Guideway Piers and Vaults	P.C. 51953A SHEET NO. 782-16 SHEET 225 OF 26
		ATTEST:	I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON. I HEREBY CERTIFY THAT I AM THE DESIGNER OF THE ABOVE WORK, AND THAT I AM NOT PROVIDING ENGINEERING SERVICES TO ANY OTHER PARTY.	DATE:	DATE:	APPROVED:	SHEET 225 OF 26

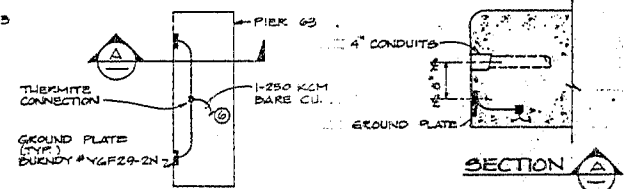
*Supplemental Drawings*



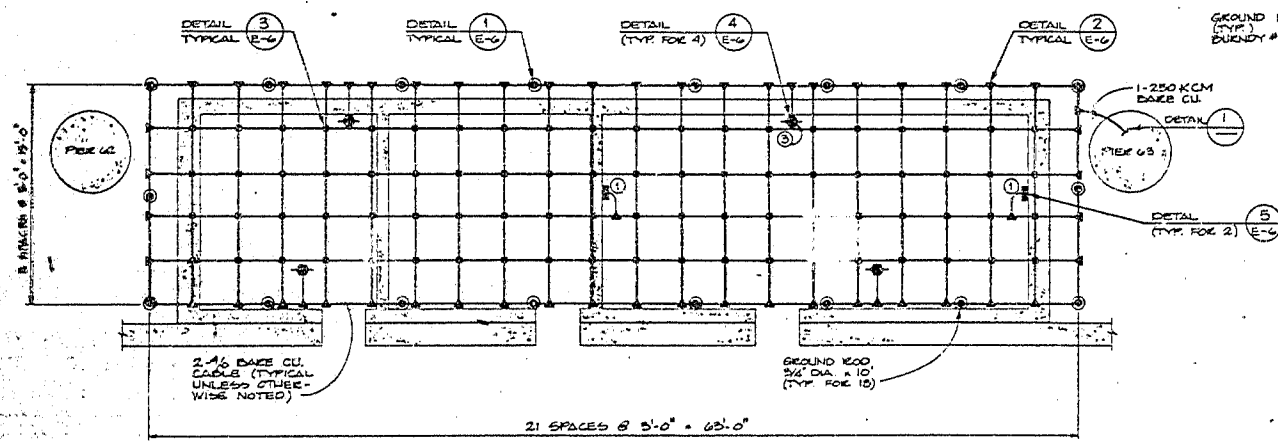
STATION GROUNDING - ELEVATION  
SCALE: 1/4" = 1'-0"



GROUNDING PLAN - VAULT A  
SCALE: 1/2" = 1'-0"



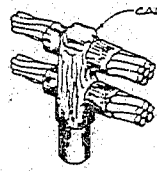
PIER-G3 GROUNDING DETAIL 1  
NO SCALE



STATION GROUNDING - PLAN  
SCALE: 1/4" = 1'-0"

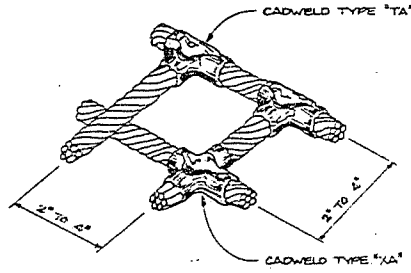
- NOTES**
1. CONNECT GROUND WIRES TO GROUND GRID TEST STATION.
  2. INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE ANSI-C2, 1987.
  3. GROUND GRID TO FOUNDATION/SLAB REBAR (MINIMUM 4 PLACES).
  4. STATION GROUND GRID TO BE PLACED DEPTH OF GRAVEL SEE SECTION B-B SHEET 5-7.
  5. SEE DRAWING E-6 FOR GROUNDING SYMBOLS AND DETAILS.
  6. CONTINUE GROUND DOWN TO GROUND GRID AS SHOWN.
  7. DRIVE GROUND SUFFICIENTLY TO LEAVE TOP 1/2" ROD ABOVE VAULT FLOOR.
  8. ADJUST GROUND GRID LOCALLY TO AVOID OUTLET AND AIR INTAKE DUCTS. SEE SHEETS E-2 & M-2.

<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON <small>DOM ENGINEERING COMPANY K. HOUJ GROUP GDM ASSOCIATES, INC.</small>		<small>APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS</small> <small>SEATTLE, WASHINGTON</small> <small>DATE: 5/19/87</small> <small>ATTEST:</small>		<small>NAME OF INITIALS AND DATE</small> <small>DESIGN: E. C. ...</small> <small>DATE: 5/19/87</small> <small>BY: AM ...</small> <small>DATE: 5/19/87</small> <small>BY: ...</small> <small>DATE: 5/19/87</small>		<small>INITIALS AND DATE</small> <small>REVIEW: ...</small> <small>DATE: 5/19/87</small> <small>BY: ...</small> <small>DATE: 5/19/87</small>		<small>THE CITY OF SEATTLE</small> <small>DEPARTMENT OF ENGINEERING</small> <small>REFERENCE NO. 113351</small> <small>FILE NO. ...</small> <small>DATE: ...</small> <small>BY: ...</small>		<b>GROUNDING PLAN</b> <span style="float: right;">E-</span> Seattle Monorail Rehabilitation and Upgrading Project Contract 4 By Guideway Piers and Vaults		<small>PROJECT NO. 51553A</small> <small>DATE: 5/19/87</small> <small>BY: ...</small> <small>DATE: 5/19/87</small> <small>BY: ...</small> <small>DATE: 5/19/87</small>
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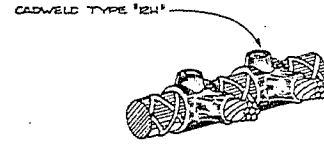
GROUND ROD CONNECTION

DETAIL 1  
E-5



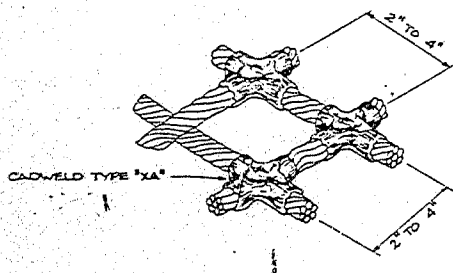
GROUND CABLE "SINGLE CROSS - DOUBLE TEE" CONNECTION

DETAIL 2  
E-5



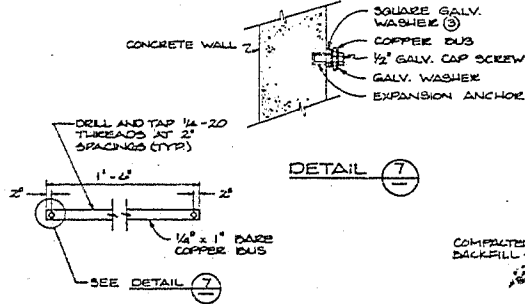
GROUND CABLE TO REBAR CONNECTION

DETAIL 4  
E-5



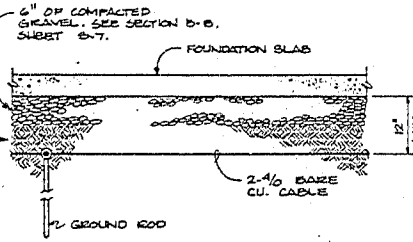
GROUND CABLE "FOUR-CROSS" CONNECTION

DETAIL 3  
E-5



GROUND TEST STATION

DETAIL 5  
E-5



DETAIL 6  
E-5

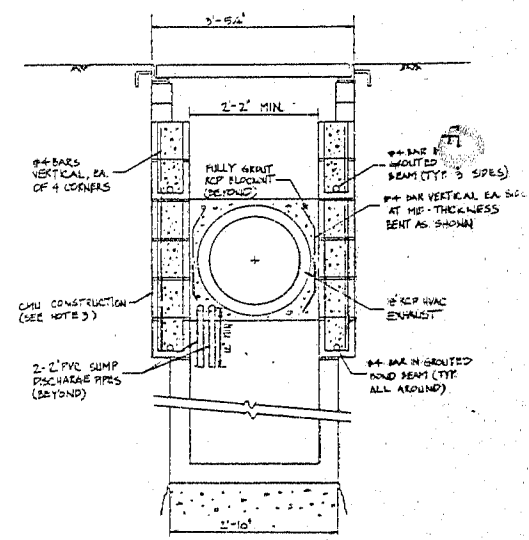
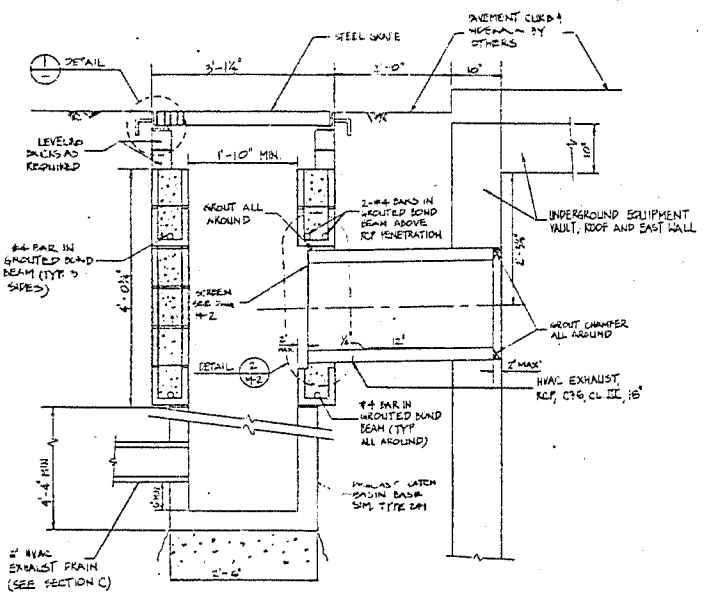
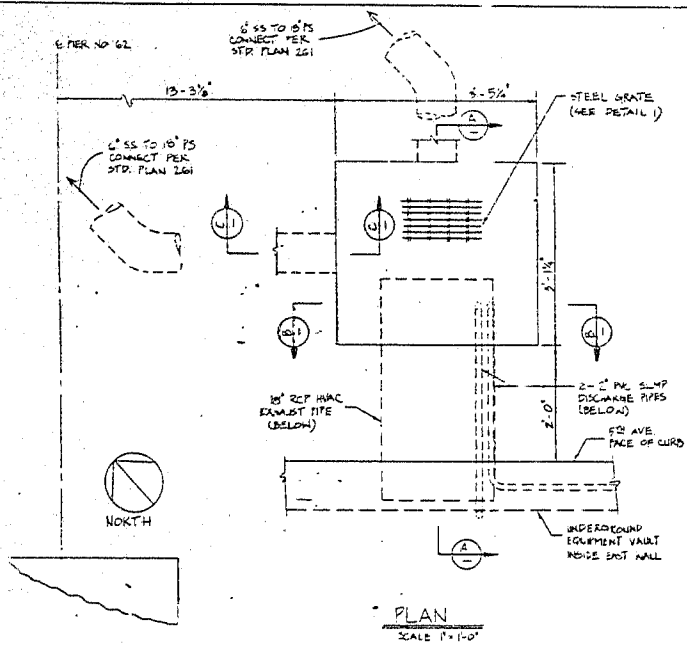
LEGEND

- ⊙ GROUND ROD 3/4" x 10'-0" CU.
- ▲ GROUND CABLE "SINGLE CROSS-DOUBLE TEE" CONNECTION (EXOTHERMIC)
- GROUND CABLE "FOUR CROSS" CONNECTION (EXOTHERMIC)
- ⊗ GROUND CABLE TO REBAR CONNECTION (EXOTHERMIC)

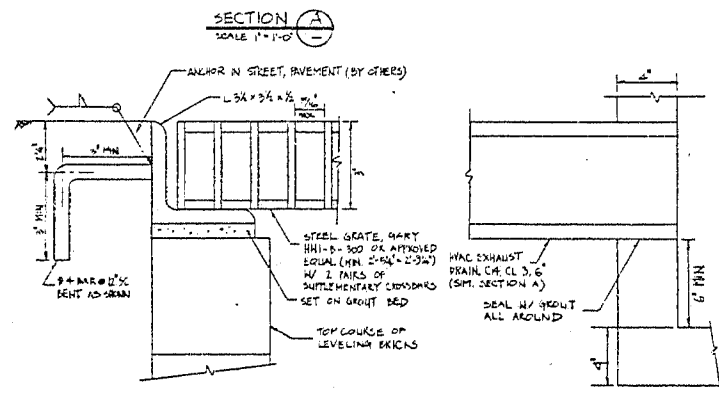
NOTES

1. GROUND GRID CABLES SHALL BE BURIED A MINIMUM OF 1'-6" BELOW FINISH SLAB ELEVATION.
2. ALL CONNECTIONS TO BE MADE BY EXOTHERMIC WELDING TYPE PROCESS (CADWELD OR APPROVED EQUAL).
3. PROVIDE SUFFICIENT NO. OF WASHERS TO PROVIDE 1" CLEARANCE BETWEEN BUS AND CONCRETE SURFACE.

<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON AN ENGINEERING COMPANY MESSER GROUP SON ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON DATE: 11/17/1977 SIGNATURE: [Signature] TITLE: [Title]		NAME OF INITIALS AND DATE DESIGNER: [Signature] CHECKED: [Signature] DRAWN: [Signature]		INITIALS AND DATE REVIEWER: [Signature] DATE: [Date] TITLE: [Title]		THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING PROJECT NO. 113351 SHEET NO. 2		Seattle Monorail Rehabilitation and Upgrading Project Contract 4 By Guideway Piers and Vaults		PROJECT NO. S1553A SHEET NO. 782-53 DRAWING NO. 24-#2
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- NOTES:**
- 1 HVAC EXHAUST CONSTRUCTION TO BE SIMILAR TO STANDARD CATCH BASIN TYPE 241 EXCEPT AS NOTED.
  - 2 MATERIAL AND CONSTRUCTION REQUIREMENTS AS SPECIFIED IN SPECIAL PROVISIONS SECTION 10-01.
  - 3 FULLY GROUT ALL CMU CELLS.



**HVAC EXHAUST STRUCTURE**

Seattle Monorail Rehabilitation and Upgrading Project  
 Contract 4  
 By Guideway Piers and Vaults

**Kaiser Engineers Inc.**  
 SEATTLE, WASHINGTON

**Horton Dennis & Associates, Inc.**  
 MARLENE LEE LIGHTING DESIGN  
 GEO/RESOURCE CONSULTANTS  
 ANNE STOKHOS & ASSOCIATES, INC.



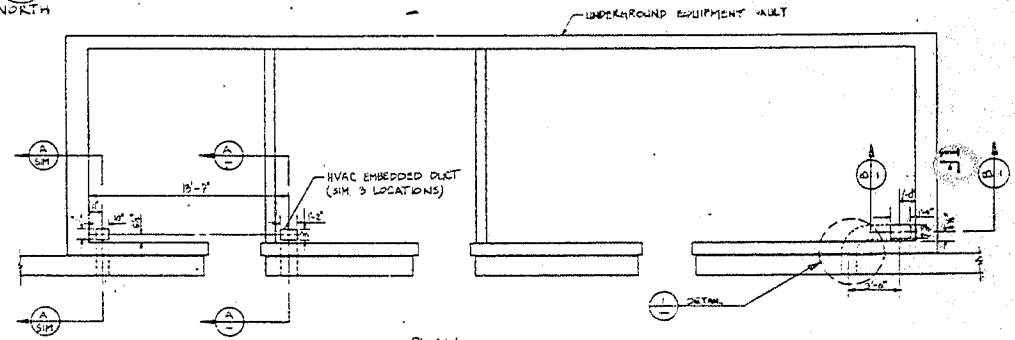
APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON 6/27/1983	NAME OF INITIALS AND DATE SEVEN J. CHAPMAN 3/2/83	INITIALS AND DATE
ATTEST: 6/27/1983	REVISIONS	

THE CITY OF SEATTLE  
 DEPARTMENT OF ENGINEERING

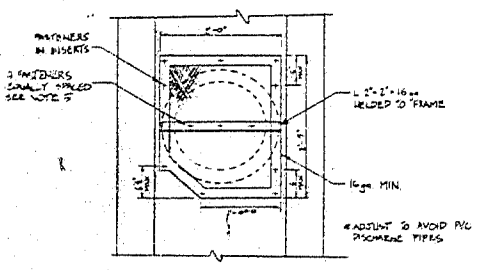
PC - 81953
782-10
SHEET 25 OF 2

**NOTES:**

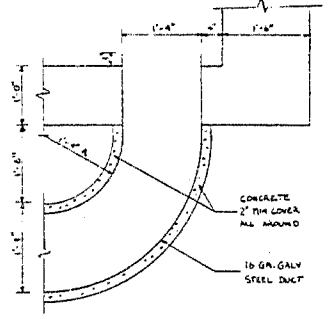
1. OUTLET SCREEN HARDWARE: 1/2" DIA. BOLT, 1 PLAIN WASHER, 1 LOCK WASHER, ALL GALV., EACH CONNECTION.
2. SEE SECTION 10-01 OF THE SPECIFICATIONS SPECIAL PROVISIONS FOR OUTLET SCREEN REQUIREMENTS.
3. SEE SECTION 10-02 OF THE SPECIFICATIONS SPECIAL PROVISIONS FOR HVAC EMBEDDED DUCT REQUIREMENTS.
4. INCREASE SLAB OPENING 1/4" ALL AROUND FOR CONNECTION TO INTERIOR DUCTWORK.
5. STIFFENER HARDWARE: 1/2" DIA. BOLT, 2 PLAIN WASHERS, 1 LOCK WASHER, 1 NUT, ALL GALV.



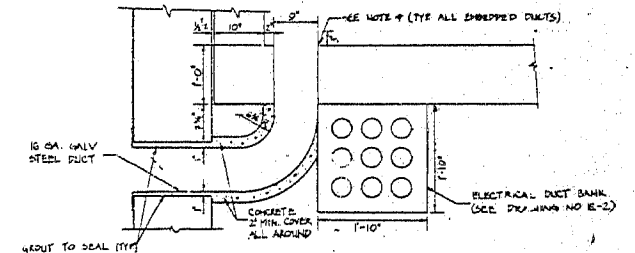
PLAN  
SCALE 1/4" = 1'-0"



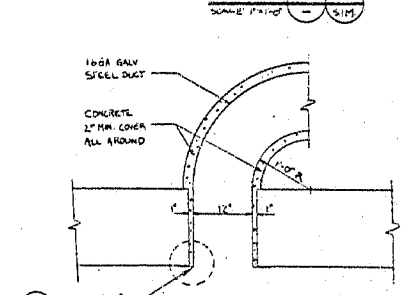
DETAIL  
SCALE 1/4" = 1'-0"



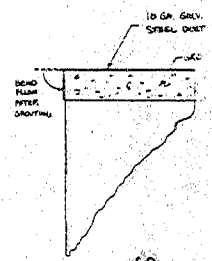
SECTION B  
SCALE 1/4" = 1'-0"



SECTION A  
SCALE 1/4" = 1'-0"



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



DETAIL 2  
SCALE 1/4" = 1'-0"

Mechanical Details

<b>KAISER ENGINEERS INC.</b> SEATTLE, WASHINGTON NORTH DENNIS & ASSOCIATES, INC. HUNTER LEE LIGHTING DESIGN GEO/RESOURCE CONSULTANTS ANNE SYMONS & ASSOCIATES, INC.		APPROVED FOR ADVERTISING BY THE BOARD OF PUBLIC WORKS SEATTLE, WASHINGTON DATE: 6/22/1987	DATE OF INITIALS AND DATE DESIGNED: <i>[Signature]</i> DRAWN: <i>[Signature]</i> CHECKED: <i>[Signature]</i> SPECIAL SERVICES: <i>[Signature]</i>	INITIALS AND DATE REVIEWED: <i>[Signature]</i> DESIGNED: <i>[Signature]</i> DRAWN: <i>[Signature]</i> CHECKED: <i>[Signature]</i> SPECIAL SERVICES: <i>[Signature]</i>	THE CITY OF SEATTLE DEPARTMENT OF ENGINEERING	Seattle Monorail Rehabilitation and Upgrading Project Contract 4 By Guideway Piers and Vaults	PROJECT NO. 51553A SHEET NO. 782-163 OF 26
		PROJECT NO.	SHEET NO.	OF	SHEET NO.	PROJECT NO.	SHEET NO.

MONORAIL REHABILITATION & UPGRADING PROJECT  
 CITY OF SEATTLE  
 SEATTLE, WASHINGTON

Job No. 84188-530  
 DATE: 25-Jun-87  
 Y. Fainstein  
 Page 1 of 1

BID ITEM LIST CONTRACT NO. 4 GUIDEWAY PIERS AND VAULTS

ITEM NO	SED ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	107010	TRAFFIC CONTROL	: LS :	1		
2	109005	MOBILIZATION	: LS :	1		
3	202010	REMOVE PAVEMENT	: SY :	190		
4	202240	REMOVE CEM CONC SIDEWALK	: SY :	90		
5	202400	SAW CEMENT CONCRETE, 2 INCH	: LF :	780		
		: MIN DEPTH	: :			
6	202S02	REMOVE FOUNDATIONS	: LS :	1		
7	209005	STRUCTURE EXCAVATION	: CY :	950		
8	209010	SHORING & CRIBBING OR	: LS :	1		
		: EXTRA EXCAVATION	: :			
9	401002	MINERAL AGGREGATE, TYPE 2	: TON :	45		
10	401017	MINERAL AGGREGATE, TYPE 17	: TON :	250		
11	507005	PVMT PATCH, CEMENT CONC	: CY :	25		
		: CLASS 6.5 (1-1/2), H.E.S.	: :			
12	507010	PVMT, PATCH ASPHALT CONC CL B	: TON :	14		
13	507250	PVMT PATCH, TEMP, MC250	: TON :	20		
14	602010	CONC CL AX, FOR COLUMNS	: CY :	65		
15	602S01	CONC CL AX, FOR PWR CAPS	: CY :	25		
16	602S02	CONC CL AX, FOR CAST IN	: CY :	114		
		: PLACE VAULT	: :			
17	602080	STEEL REINF BAR	: LB :	55500		
18	605S02	SHAFT, 6 FT DIAMETER	: LF :	125		
19	708208	PIPE, CATCH BAS CONN CONC C14	: LF :	55		
		: CLASS 3, 6"	: :			
20	717008	BEDDING, CL B, 6" PIPE	: LF :	55		
21	717S01	TEE, 6", CUT-IN EXISTING	: EA :	2		
		: CONCRETE PIPE	: :			
22	834S01	PRE-CAST CONC VAULT	: LS :	1		
23	1001S1	HVAC EXHAUST	: LS :	1		
24	1002S1	EMBEDDED HVAC DUCTS	: EA :	3		
25	1003S1	SUMP DISCH PIPE, PVC, 2"	: LF :	160		
26	1101S1	CONCRETE	: CY :	22		
27	1101S2	2" CONDUIT	: LF :	25		
28	1101S3	4" CONDUIT	: LF :	1490		
29	1101S4	REINFORCEMENT STEEL	: LB :	220		
30	1102S1	ELECTRICAL RACEWAYS	: LS :	1		
31	1103S1	GROUNDING	: LS :	1		
32	1201S1	LIMESTONE VENEER	: SF :	1210		
33	1202S1	STAIR RAILINGS	: LS :	1		
34	1203S1	MTL DOORS, FRAMES & HARDWARE	: EA :	3		
35	1204S1	MEMBRANE ROOFING	: SF :	950		
36	1205S1	SIGHAGE	: LS :	1		
37	1206S1	FLOOR SEALER	: LS :	1		
38	1207S1	WATERPROOFING	: SF :	1910		
		: TOTAL	: :			

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE,  
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MONORAIL REHABILITATION & UPGRADING PROJECT  
CITY OF SEATTLE  
DECEMBER, 17TH 1987

HOWARD S. WRIGHT CONSTRUCTION COMPANY

BID ITEM LIST CONTRACT NO. 4 GUIDEWAY PIERS AND VAULTS

ITEM NO	DESCRIPTION	UNIT	CITY QUANTITY	UNIT PRICE	AMOUNT	REMARKS
1	TRAFFIC CONTROL	LS	1	10,690.65	10,691	
2	MOBILIZATION	LS	1	42,215.62	42,216	
3	REMOVE PAVEMENT	SY	190	18.19	3,456	
4	REMOVE CEM CONC SIDEWALK	SY	90	17.74	1,597	
5	SAW CEMENT CONCRETE, 2" MIN DEPTH	LF	780	3.21	2,503	
6	REMOVE FOUNDATIONS	LS	1	2,728.97	2,729	
7	STRUCTURAL EXCAVATION	CY	950	30.32	28,801	
8	SHORINGS & EXCAVATION	LS	1	59,584.50	59,585	
9	MINERAL AGGREGATE, TYPE 2	TON	45	30.98	1,394	
10	MINERAL AGGREGATE, TYPE 17	TON	250	23.83	5,959	
11	PVMT PATCH, CEMENT CONC	CY	25	89.38	2,234	
12	PVMT PATCH, ASPHALT CONC CL B	TON	14	125.13	1,752	
13	PVMT PATCH, TEMP. MC250	TON	20	125.13	2,503	
14	CONC CL AX. FOR COLUMNS	CY	65	278.31	18,090	
15	CONC CL AX. FOR PIER CAPS	CY	25	1,035.72	25,893	
16	CONC CL AX. FOR CIP VAULT	CY	114	361.89	41,255	
17	REBAR	LB	55,500	0.71	39,221	
18	SHAFT, 6FT IN DIA.	LF	125	425.27	53,159	
19	PIPE, CATCH BAS CON CONC C14 CLASS 3, 6" LF	LF	55	172.80	9,504	
20	BEDDING, CLB, 6" PIPE	LF	55	3.58	197	
21	TEE, 6", CUT IN EXISTING PIPE	EA	2		NIC	
22	PRECAST CONC VAULT	LS	1	23,388.11	23,389	
23	HVAC EXHAUST	LS	1	10,606.04	10,606	
24	EMBEDDED HVAC DUCTS	EA	3	2,553.39	7,660	
25	SUMP DISCH PIPE, PVC, 2"	LF	160	0.97	155	
26	CONCRETE	CY	22	102.92	2,264	
27	2" CONDUIT	LF	25	147.86	3,697	
28	4" CONDUIT	LF	1,490	15.24	22,173	
29	REBAR	LB	220	7.85	1,728	
30	ELECTRICAL RACEWAYS	LS	1		INCL	
31	GROUNDING	LS	1	26,076.56	26,077	
32	LIMESTONE VENEER	SF	1,210	79.67	96,405	
33	STAIR RAILINGS	EA	1	5,073.02	5,073	
34	MTL DOORS, FRAMES & HARDWARE	EA	3	766.26	2,299	
35	MEMBRANE ROOFING	SF	950		INCL	
36	SIGNAGE	LS	1		NIC	
37	FLOOR SEALER	LS	1	587.50	588	
38	WATERPROOFING	SF	1,910	7.41	14,151	

TOTAL - WITHOUT SALES TAX

573,999

BID ITEM LIST CONTRACT NO. 4 GUIDEWAY PIERS AND VAULTS

ITEM NO	DESCRIPTION	UNIT	HSWCC QUANTITY	UNIT PRICE	AMOUNT	REMARKS
1	TRAFFIC CONTROL	LS	1	10,690.65	10,691	
2	MOBILIZATION	LS	1	42,215.62	42,216	
3	REMOVE PAVEMENT	SY	190	18.19	3,456	
4	REMOVE CEM CONC SIDEWALK	SY	90	17.74	1,597	
5	SAW CEMENT CONCRETE, 2" MIN DEPTH	LF	780	3.21	2,503	
6	REMOVE FOUNDATIONS	LS	1	2,728.97	2,729	
7	STRUCTURAL EXCAVATION	CY	950	30.32	28,801	
8	SHORINGS & EXCAVATION	LS	1	59,584.50	59,585	
	A. CIP VAULT	LS	1	37,041.00	37,041	
	B. VAULT "A"	LS	1	22,544.00	22,544	
9	MINERAL AGGREGATE, TYPE 2	TON	45	30.98	1,394	
10	MINERAL AGGREGATE, TYPE 17	TON	250	23.83	5,959	
11	PVMT PATCH, CEMENT CONC	CY	25	89.38	2,234	
12	PVMT PATCH, ASPHALT CONC CL B	TON	14	125.13	1,752	
13	PVMT PATCH, TEMP. MC250	TON	20	125.13	2,503	
14	CONC CL AX. FOR COLUMNS	CY	65	278.31	18,090	
15	CONC CL AX. FOR PIER CAPS	CY	29	671.79	18,810	
	A. BRACING FOR REBAR	CY	28	157.46	4,409	
	B. HSW PREMIUM TIME	CY	28	95.5	2,674	
16	CONC CL AX. FOR CIP VAULT	CY	114	361.89	41,255	
17	REBAR	LB	80,000	0.46	39,221	
18	SHAFT, 6FT IN DIA.	LF	125	425.27	53,159	
19	PIPE, CATCH BAS CON CONC C14 CLASS 3, 6" LF	LF	55	172.80	9,504	
20	BEDDING, CLB, 6" PIPE	LF	55	3.58	197	
21	TEE, 6", CUT IN EXISTING PIPE	EA	2		NIC	
22	PRECAST CONC VAULT	LS	1	23,388.11	23,389	
23	HVAC EXHAUST	LS	1	10,606.04	10,606	
24	EMBEDDED HVAC DUCTS	EA	3	2,176.00	6,528	
	A. HVAC DUCTS	EA	1	238.00	238	
	B. FLOOR DRAIN	EA	1	894.00	894	
	C. HSW LABOR & MATERIAL	EA	1			
25	SUMP DISCH PIPE, PVC, 2"	LF	160	0.97	155	
26	CONCRETE	CY	22	102.92	2,264	
27	2" CONDUIT	LF	300	11.09	3,327	
28	4" CONDUIT	LF	1,840	12.00	22,072	
29	REBAR	LB	220	7.85	1,728	
30	ELECTRICAL RACEWAYS	LS	1	5,471.00	5,471	
31	GROUNDING	LS	1	26,076.56	26,077	
32	LIMESTONE VENEER	SF	1,398	64.98	90,843	
	B. GROUT	SF	1,398	3.98	5,562	
33	STAIR RAILINGS	LS	1	682.00	682	
	A. STAIR RAILINGS	LS	1	4,391.00	4,391	
	B. MISC IRON	EA	3	766.26	2,299	
34	MTL DOORS, FRAMES & HARDWARE	EA	3	766.26	2,299	
35	MEMBRANE ROOFING	SF	950		INCL	
36	SIGNAGE	LS	1		NIC	
37	FLOOR SEALER	LS	1	587.50	588	
38	WATERPROOFING	SF	1,910	3.57	6,829	
	A. MEMBRANE ROOFING	SF	1,910	4.09	7,829	
	B. WATERPROOFING	SF	484	1.19	577	
	C. DAMPPROOFING & W.L. WALL	SF	1	2,349.00	2,349	
	D. PROTECTION BOARD	LS	1			

TOTAL - WITHOUT SALES TAX

573,999

Seattle  
Engineering Department

MAILED FROM S E D

OCT 27 1987



Gary Zarker, Director of Engineering  
Charles Royer, Mayor

October 26, 1987

Mr. Darrell Vange  
Rouse-Seattle, Inc.  
414 Olive Way, Suite 500  
Seattle, WA 98101

SUBJECT: Monorail Rehabilitation and Upgrade, Contract 4

Dear Darrell,

Twenty sets of bid documents for the Monorail Pier and vault work adjacent to Westlake Center were transmitted to you last week under separate cover. We agree to this work which will be accomplished by your contractor as a Private Contract. The City wishes to proceed in order to assure timely completion.

Please provide us with a price for performing this work on the following conditions:

1. The contractor and subcontractors will be selected by you, with the primary objective being timely completion of the work in coordination with other being performed on Westlake Center and the Metro Station.
2. Accounting and payment for the work would be subject to the terms of the Monorail Operating and Easement Agreement dated February 13, 1987 and the Contract for Sale of Property dated August 17, 1984, as amended. This work shall be deemed to be "Associates Work" as defined in the Monorail Agreement.
3. Your bid price will be prepared using the bid items list enclosed with this letter.
4. Bid documents consist of Wash DOT/APWA 1984 Standard Specifications, 1986 City of Seattle Supplement; 1986 City of Seattle Standard Plans, Special Provisions and Seattle Municipal Rehabilitation and Upgrade Contract 4 Plans (782-163). Note that Amended Division 1 (August 11, 1987) is being sent under separate cover.
5. Supplemental drawings will be issued by the City as noted in bid document transmittal.

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Mr. Darrell Vange  
October 26, 1987  
Page 2

6. Where the bid documents differ in their requirements from the Monorail Agreement and Contract for Sale, these latter agreements shall prevail. For example, purchasing procedures and compliance with WMBE requirements will be as specified in the Contract for Sale, not as specified in the attached bid documents. The work will be bid, awarded and performed as work between two private parties.
7. Cost overruns and cost savings will be treated as specified in the Contract for Sale, and the work is not to proceed until a guaranteed maximum price is submitted to the City for this work, and that price is accepted in writing by the City.
8. Construction of the Column Wrap will be subject to overall project budget constraints and may be deleted by the City in order to assure adequate funding of critical project elements.
9. Work will be done under a City of Seattle Utilities Permit (Attached for Execution) subject to full time inspection by the City, material testing and source approvals.
10. The Contractor will submit shop drawings as required for City review and approval.
11. The Contractor will carry insurance with the City named as additional insured as specified in Section 1-07.18.
12. Upon acceptance of the work by the City, ownership will rest with Seattle Center.

The Engineering Department will be managing this construction for the City.

Please submit your cost proposal to Engineering within 30 days and the executed "Application for Utilities Permit" as soon as possible so that we can obtain Board of Public Works approval. Once we have a acceptable estimate and a Board approved permit, we will issue a letter of agreement and notice to proceed and set up a preconstruction conference so that work can commence on January 4, 1988.

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Mr. Darrell Vange  
October 26, 1987  
Page 3

Correspondence and questions should be directed to Phil Frederick  
(684-5191) of the Engineering Department.

Sincerely,

Philip M. Frederick  
Monorail Project Manager

PMF:tta

Attachments

- ° Application for Utilities Permit
- ° Bid Item List

cc: Gary Zarker, Seattle Engineering Department  
David Mosely, Dept. of Community Development  
A. Bruce Wasell, Seattle Engineering Department  
Ewen Dingwall, Seattle Center  
Herb Johnson, Seattle Engineering Department  
Bob Chandler, Seattle Engineering Department  
Rich Smith, Dept. of Community Development  
Anne Strode, Seattle Center  
Kirk Jones, Seattle Engineering Department

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WESTLAKE CENTER  
OWNER C.O. NO.  
1/28/88

EXHIBIT "A"

CONTRACT DOCUMENTS  
GUIDEWAY PIERS & VAULTS, CONTRACT #4  
JANUARY 28, 1988

1. The Director of Engineering Plans, Drawing No. 782-163, Sheets 1 through 26 dated August 7, 1987.
2. Special provisions Guideway Piers and Vaults - Contract 4 undated but received by Howard S. Wright Construction Co., October 20, 1987.
3. The City of Seattle Standard Plans and Specifications, (see Exhibit "B" for inclusions) which are comprised of:
  - a. "1984 Standard Specifications for Road, Bridge and Municipal Construction, "as prepared by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association (hereinafter referred to as APWA Standard Specification), as modified by Phil Frederick of Seattle Engineering Department.
  - b. "City of Seattle Supplement to Standard Specifications for Road, Bridge, and Municipal Construction and Standard Plans, 1986 Edition", as modified by Phil Frederick of Seattle Engineering Department.
  - c. Traffic Control Manual for In-Street work, Seattle, Washington, January 1, 1976", which supplements and is to be utilized in conjunction with the "Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 1978 Edition, "as published by the Department of Transportation, Washington, D.C.
4. Addendum No. 1 dated November 13, 1987 - includes: Special provision Section 1-08.3 (3) - revised and Section 1-08.3 (4) - new, and descriptive changes to drawings sheets No. 13 and 14.

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EXHIBIT "B1"

GUIDEWAY PIERS & VAULTS, CONTRACT #4  
QUALIFICATIONS & CLARIFICATIONS  
JANUARY 28, 1988

1. Schedule, and therefore all project costs, are based on a construction start of March 1, 1988 and a completion at May 6, 1988.
2. Division one and amendments to Division 1, dated August 11, 1987, of the "City of Seattle Supplement to Standard Specifications for Road, Bridge and Municipal Construction and Standard Plans, 1986 edition" are agreed to as follows:
  - a. Sections agreed to in full: 1-04.1, 1-04.7, 1-04.9, 1-05.1, 1-05.2, 1-05.3, 1-05.3 (1), 1-05.5 (1), 1-05.6, 1-05.7, 1-05.11 (2), 1-05.15, 1-05.16, 1-06.3, 1-06.4, 1-07.4, 1-07.5, 1-07.5 (1), 1-07.5 (2), 1-07.5 (3), 1-07.5 (4), 1-07.5 (5), 1-07.7, 1-07.11, 1-07.11 (4), 1-07.17, 1-07.17 (1), 1-07.17 (1)A, 1-07.17 (1)B, 1-07.19, 1-07.20, 1-07.21, 1-07.22, 1-07.23, 1-07.23 (1), 1-07.23 (2), 1-07.23 (2) 13, 1-07.23 (3), 1-07.23 (4), 1-07.28, 1-08.2, 1-08.3, 1-08.7, 1-08.10 (1), 1-08.10 (2), 1-08.10 (3), 1-08.10 (4), 1-08.11 (1), 1-09.1
  - b. Partial acceptance of sections as marked up by Phil Frederick, of Seattle Engineering Department:  
  
1-04.12, 1-05.4, 1-05.5 (2), 1-05.10 (1), 1-05.12, 1-05.13, 1-06.2, 1-08.3 (1), 1-08.4, 1-07.6.
  - c. All remaining sections are excluded. All contract obligations Howard S. Wright Construction Company presently has with the Rouse Company remain in force.
3. A soldier pile and treated wood lagging shoring system will be used at the C.I.P. vault. Upon completion of vault, lagging and soldier piles will be removed 5' down from finish grade. All remaining shoring system will remain in place. Any city bond costs associated with leaving shoring system in place is excluded.
4. Soldier piles, wood lagging and mass excavation will be complete before construction of drilled shafts take place at Piers 62 and 63. Remaining work at C.I.P. vault and piers will concurrently take place. This is in lieu of specified procedure in Section 1-08.3 (5) 2 of Contract 4, special provisions.
5. Casings will be left in the ground at drilled shafts.
6. Vault equipment must be delivered to and installed in vault by others before vault hatch is waterproofed and backfill is completed at the vault.
7. Floor sealer is included as a "Seca Guard" epoxy penetrating sealer.

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WESTLAKE CENTER  
OWNER C.O. NO.  
1/28/88

## EXHIBIT "B2"

GUIDEWAY PIERS & VAULTS CONTRACT #4  
EXCLUSIONS (INCLUDING ALL COSTS FOR EXCLUSIONS)  
JANUARY 28, 1988

1. Street use and building permit are excluded.
2. Testing and inspection is excluded.
3. Builder's risk insurance is excluded.
4. Bond is excluded.
5. Seattle City Light charges are excluded.
6. Hook-up connection to 18" P.S., as shown on drawings, is excluded.
7. Signage is excluded.
8. Utility cabling is excluded.
9. Relocation of traffic control conduits is excluded.
10. Restoration of curbs and sidewalks which are removed for construction of U/G electrical duct banks and vaults is excluded.
11. All other exclusions and qualifications that are a part of Howard S. Wright Construction Co.'s contract for the Westlake Center Project are applicable to this change order.
12. Drawing Number 10S and 13S of 26 dated 12/18/87 and drawings E-25 and E-45 received by Howard S. Wright Construction Company, 12/28/87 are excluded. Inclusion of these documents and/or any costs associated with these revisions will be added by change order at a later date.
13. Stone cladding at Piers 60, 61, 62, 63 and 64 is excluded. A sacked concrete finish per specifications is included at Piers 60, 61, 62, and 63. Construction and finish at Pier 64 is excluded.
14. Use of shoring at main vault walls requires that grounding mat shown on drawing E-5 be modified. All costs associated with this modification, if any, are excluded.

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