W. 30TH AVENUE & NORTH STAR STREET UPGRADES SPENARD ROAD TO ARCTIC BOULEVARD

65% DESIGN

Invitation to Bid No. 2020C0XX



Municipality of Anchorage PROJECT MANAGEMENT & ENGINEERING DEPARTMENT PO Box 196650 Anchorage, Alaska 99519

W. 30TH AVENUE & NORTH STAR STREET UPGRADES FRUCTION (NOV 2019) SPENARD ROAD TO ARCTIC BOULEVARD

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MUNICIPALITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

W. 30TH AVENUE & NORTH STAR STREET UPGRADES SPENARD ROAD TO ARCTIC BOULEVARD PRELIMMARY SUBMITTAL

16-29

INVITATION TO BID

L

MUNICIPALITY OF ANCHORAGE PURCHASING DEPARTMENT

Invitation to Bid

No. 2020C0

Sealed bids will be received in accordance with the time schedule shown below by the Municipality of Anchorage at the Purchasing Department, 632 W. 6th Avenue, Suite 520; Anchorage, Alaska, 99501, for:

W. 30TH AVENUE & NORTH STAR STREET UPGRADES

Consisting of approximately 16,000 C.Y. of Excavation; 27,900 Tons of Classified Fill and Backfill; 1,730 L.F. of Curb and Gutter Removal; 7,800 S.Y. of Pavement Removal; 960 Tons A.C. Pavement; 4,100 L.F. Curb and Gutter Installation; 110 S.Y. Curb Ramp Installations; 74,000 S.F. Insulation Installation (R-9); 5,950 S.F. Insulation Installation (R-4.5); 1,385 S.Y. P.C.C. Sidewalk (Varying Thickness); 100 C.Y. P.C.C. Retaining Walls; 1,260 L.F. of Storm Drain Pipe; 11 Storm Drain Manholes; 12 Storm Drain Catch Basins; 1 Stormwater Treatment Structure; 20 Roadway Luminaires (including spares); 10 Pedestrian Light Columns (including spares); 1 Type 1A Load Center; 1,200 L.F. Remove and Reset Fence; 1 Remove and Reset Gate; 221 S.F. Standard Signs; Landscaping and related work.

ESTIMATED CONSTRUCTION COST: Between \$2,000,000 and \$4,000,000

Site Visit(s) at

Pre-Bid Conference at

REQUEST ANY QUESTIONS BE SUBMITTED IN WRITING TO <u>WWPUR@MUNI.ORG</u>. BEFORE THE PRE-BID CONFERENCE. Please reference the Project Title and Invitation to Bid No. 2020C0_____

Bids Opened at

Post-Bid Conference at

An electronic (.pdf) copy of the Invitation to Bid is available at Municipality of Anchorage, Purchasing Office's website; (<u>http://purchasing.muni.org</u>). Should you choose to obtain a copy of the Invitation to Bid from the website; it is your responsibility to periodically check the website for addenda.

At the above-indicated time, the bids will be opened publicly and read. Bids must be received by the Purchasing Officer prior to the time fixed for opening of the bids to be considered. Time of receipt will be as determined by the time stamp in the Purchasing Office, Suite 520.

Drawings, specifications, and contract documents may be examined and will be available for pickup at 632 W. 6th Avenue, Suite 520; Anchorage, Alaska; Monday through Friday, 8 a.m. until 12 noon and 1 p.m. until 5 p.m. These documents are available for sale on a non-refundable basis at \$_____ per set (cash or check only).

Fees stated above include parcel post charges (1st class mail). Should expedited handling be desired, Federal Express or equivalent service will be utilized on a reverse billing basis only.

The Municipality of Anchorage reserves the right to reject any and all bids and to waive any informalities in the bids. No bidder may withdraw his bid after the hour set for the opening of bids or before the Award of Contract unless said award is delayed for a period exceeding forty-five (45) days from the time of the opening.

The Municipality shall not be responsible for bid preparation costs, nor for costs, including attorney fees, associated with any (administrative, judicial, or otherwise) challenge to the determination of the lowest responsive and responsible bidder and/or award of contract, and/or rejection of bids. By submitting a bid, each bidder agrees to be bound in this respect and waives all claims to such costs and fees.

Contracts shall be awarded by written notice issued by the Purchasing Officer to the lowest responsive and responsible bidder; however, preference will be given to local bidders in compliance with Anchorage Municipal Code, Section 7.20.040.

A pre-bid conference will be held at the above-indicated time in the Purchasing Office for the purpose of answering any questions bidders may have and to consider any suggestions they may wish to make. Any changes resulting from this conference will be made by Addendum immediately following the conference. This conference is held for the benefit of the bidders. It is requested that some person of authority from the office of the prospective bidder attend this meeting.

The Municipality of Anchorage assumes no responsibility for any interpretations or presentations made by any of its officers or agents unless such interpretations or presentations are made by written addendum to this Invitation to Bid.

Bonding requirements are per M.A.S.S.B./M.A.S.S. or as per Special Provisions.

PUBLISH ONE TIME

Date _____

Ronald S. Hadden Purchasing Officer



W. 30TH AVENUE & NORTH STAR STREET UPGRADES SPENARD ROAD TO ARCTIC BOULEVARD

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W. 30TH AVENUE & NORTH STAR STREET UPGRADES 01/10/2019) SPENARD ROAD TO ARCTIC BOULEVARD

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SPECIAL PROVISIONS

SECTION 95.01 LOCATION AND SCOPE

All proposed Work is located within the Municipality of Anchorage corporate limits and is more particularly located on West 30TH Avenue, North Star Street, and undeveloped property between Spenard Road and Arctic Boulevard. Work is also located within Arctic Boulevard at the W. 32ND Avenue and Arctic Boulevard intersection and along W. 32ND Avenue between Arctic Boulevard and C Street, see Drawings for detailed location. The Work included under this Contract consists of but is not limited to:

- Reconstructing West 30TH Avenue and North Start Street roadways within the project limits with a new insulated roadway structural section and installing high/low spots in the roadway profile as shown on the Drawings.
- Reconstructing the adjacent driveways with a new structural section to match the new roadway profile.
- Installing sidewalks, curb ramps and pathways at locations shown in the Drawings.
- Installing a retaining wall along the pathway on North Star Street.
- Removing and replacing the existing storm drain system and extending the storm drain system as shown on the Drawings.
- Installing new roadway lighting and pathway lighting. Replacing AWWU parking lot lighting along their west property line.
- Installing a raised pedestrian refuge island/median within Arctic Boulevard.
 - Installing signing and striping and landscaping as shown on the Drawings.
- Furnishing all labor, materials, equipment, supervision, and other facilities necessary to successfully complete the Work set forth in the Drawings and Specifications.

It is the responsibility of the bidder to prepare the bid so that all materials and/or fittings shall harmoniously conform to the intent of the Contract Drawings, Specifications, and Special Provisions.

Below are the schedules of Work that are presented in the Bid Proposal of this Contract:

SCHEDULE DESCRIPTION

A.	Roadway Improvements	Base Bid
В.	Drainage Improvements	Base Bid
C.	Illumination Improvements	Base Bid
D.	Landscaping Improvements	Base Bid

SECTION 95.02 REFERENCE TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

This Contract is subject to and hereby incorporates by reference the Municipality of Anchorage Standard Specifications, dated 2015, hereinafter referred to as M.A.S.S.; the Alaska Sign Design Specifications (ASDS) as adopted and amended by the Municipality; the Municipality of Anchorage Sign Manual; the Alaska Traffic Manual (ATM)-Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition, with the Alaska supplement, dated 1/13/12; the National Electrical Safety Code (NESC) as amended and adopted by the Municipality of Anchorage; and the Edition of the Standard Specifications for Structural Supports for Highway Sign, Luminaires and Traffic Signals provided in the appropriate divisions. When conflicts exist between M.A.S.S. and MUTCD, the requirements of M.A.S.S. and these Special Provisions shall govern.

SECTION 95.03 TIME OF COMPLETION

This Project shall be completed within one hundred ten (110) calendar days after the Notice to Proceed is issued.

SECTION 95.04 MODIFICATIONS AND/OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

The following listed provisions of M.A.S.S. are amended as hereinafter stated:

Α. **DIVISION 10** STANDARD GENERAL PROVISIONS

Add the following Section:

SECTION 10.00 ALL APPLICABLE M.A.S.S. ARTICLES

Delete all references to and requirements for compliance with Anchorage TION MON 2019 Municipal Code Chapter 7.60 the Disadvantaged/Women Owned Business (DBE/WBE) program and specifications.

SECTION 10.01 DEFINITIONS

Add the following item to the list of definitions:

BMP – Best Management Practices

CEA – Chugach Electric Association

FHWA - Federal Highway Administration

NPDES – National Pollutant Discharge Elimination System

Record Drawings – Detailed drawings which accurately depict all changes in location (both horizontal and vertical), material, equipment, and other elements of Work accomplished by Contractor. The drawings shall also depict the horizontal and vertical locations of all other utilities and obstructions encountered during construction. Final elevations and locations shall be clearly marked with actual dimensions, or existing dimensions shall be noted with "ASB" if no changes occur.

UL – Underwriters Laboratories, Inc.

SECTION 10.04 SCOPE OF WORK

Article 4.8 Work Incidental to the Contract

Add the following items which shall be incidental to the cost of the Contract:

- 14. Asphalt for tack coat.
- 15. Sawcutting, unless otherwise noted to be paid for.
- 16. Repair of existing infrastructure or areas outside of demolition limits that are damaged by Contractor.

17 Furnishing and installing grounding conductors, ground rods, and ground rod clamps.

- 18. Installation of flexible delineators at the end of culverts, ends of retaining walls, field inlets, and other locations that may be hazardous or should be delineated for snow removal operations as determined by the Engineer.
- 19. Removal and/or abandonment of soil boring caps, borings and piezometer tubes.
- 20. Remove and salvage existing signs.

- 21. Removal and disposal or replacement of private improvements within construction limits unless Pay Item is specifically identified on the Drawings.
- 22. Dewatering as required for construction.

Article 4.17 Utilities

Add the following sentence to the end of the seventh paragraph:

Utilities are the responsibility of the Contractor to request locates for, coordinate with the Work, maintain, and protect.

Add the following after the first sentence of the ninth paragraph:

Contractor shall have no right to proceed first with the Work under this Contract in advance of any utility company. Utility work being done by others within the project area will generally take place while the Contractor is performing Work necessary for this project. In the event that the Contractor is unable to continue Work without interfering with utility relocation or protection Work by others, the Engineer will direct the Contractor to Work in a different area. The Engineer may choose to suspend Work until the conflict is resolved. The Contractor shall not be entitled to additional compensation resulting from suspension of work because of conflicts with existing utilities or work incidental to utility relocation activities by others.

Below is a summary of contacts names and numbers and the work to be performed by utility companies within the project area. Once received by utility companies, Appendix C will include drawings of proposed utility work available at time of bidding but is not all inclusive of the utility relocation work required for this project. Field conditions of existing utilities may vary including depth of cover and location. Additional conflicts with utility lines and facilities may be present that will require relocation by others. No additional money will be owed to the Contractor due to any delay caused by utility companies work even if work is not specifically stated below.

Chugach Electric Association, Inc. (CEA): CEA has existing electrical facilities in the project area including lines, pedestals, poles, switch cabinets, transformers and junction boxes. CEA will be relocating their facilities as shown in their drawings in Appendix C. The following is a brief summary of their work:

1. Will be provided at 95% design submittal

The CEA contact is Gary Meadows at 762-4618.

<u>Alaska Communications (ACS)</u>: ACS has existing telephone facilities within the project area, including lines and pedestals. ACS will be relocating their facilities as shown in their drawings in Appendix C. The following is a brief summary of their work:

1. Will be provided at 95% design submittal

The ACS contact is Rod Reyes at 564-7028.

Enstar Natural Gas (Enstar): Enstar has existing plastic underground gas mains and services in the project area. Enstar will be relocating their facilities as shown in their drawings in Appendix C. The following is a brief summary of their work:

1. Will be provided at 95% design submittal

The ENSTAR contact is Jeff Hebert at 334-7756.

<u>General Communications, Inc. (GCI)</u>: GCI has existing underground coaxial cable, fiber optics lines, and structures within the project area. GCI will be relocating their facilities as shown in their drawings in Appendix C. The following is a summary of their work:

1. Will be provided at 95% design submittal

The GCI contact is David Blehm at 868-6769.

Add the following paragraph:

Underground utilities shall be continuously supported during backfill placement and compaction. Geotextile shall be separated from nearby utilities with a minimum of 1 foot of backfill material to prevent undue stress during the compaction and settlement process.

C. Gas

Add the following paragraph:

The Contractor shall download and follow the most current construction guidelines published by ENSTAR. Those guidelines can be downloaded from:

https://www.enstarnaturalgas.com/safety-education/natural-gassafety/safety-for-excavators-contractors/

(Click on the link in the last sentence of the first paragraph.)

The Final Rule from the PHMSA website can be obtained from:

http://www.phmsa.dot.gov/nprm-anprm/PHMSA-2009-0192

(Click on the "Excavation Damage 80 FR 43836 Final Rule" link on the right hand side.)

Electrical and Telecommunications

dd the following paragraph:

The Contractor shall download and follow the most current construction guidelines published by CEA. Those guidelines can be downloaded from:

http://www.chugachelectric.com/media-room/publications-request

Click on the link titled "Electrical facility Clearance Requirements".

Replace the list of Utility Companies after Article E with the following:

The following contact information is provided as a courtesy to the Contractor and is the most current list available.

Alaska Communications (ACS) – Rod Reves, 564-7028

Anchorage Water & Wastewater Utility (AWWU) – Joe Sanks, 564-2717 MON 2019

AT&T – Mike Barsalou, 264-7325

Chugach Electric Association (CEA) – Gary Meadows, 762-4618

ENSTAR Natural Gas – Jeff Hebert 334-7756

GCI, Inc. - David Blehm, 868-6769

Municipal Light & Power (ML&P) – Lance Cluff, 263-5244

Municipal Street and Storm Drain Maintenance - Eric Hodgson, 343-8100 or 317-7059

Municipal Street Light Maintenance – TBD, 343-8242

Municipal Traffic Signals Section – Mike Sickler, 343-8335

Solid Waste Services (SWS) – Evalu Filitaula, 343-6258 or 317-6863

Alaska Waste – Josh James, 688-4446

Add the following Articles:

Project Information Signs Article 4.22

Prior to beginning of any Work on the project, Contractor shall install two ownerfurnished project information signs and posts, in accordance with Section 70.12, Article 12.7 - Traffic Control Devices, in a location directed by the Engineer. The skid mounted project information signs, frames, and post skids shall be available for pick up at 5701 Northwood Drive, Monday through Thursday from 8:00 a.m. to 4:00 p.m. Owner-supplied materials for each sign assembly are as follows:

- Project Information Sign one (1) $4'x8'x''_{4}$ " MDO wood sign
- Sign Frame one (1) 2"x4" Pressure Treated (PT) lumber pre-assembled in a rectangular shape measuring 4-foot by 8-foot

Post Skids - two (2) 4"x4" PT Lumber pre-assembled measuring 6-foot at the base and standing 8-foot in height

Signs shall be affixed to frame; frame and sign shall be affixed to the post skids accordingly. Once assembled and positioned as directed by the Engineer, the Contractor shall supply and secure each post skid with two (2) each 50-pound sand bags, or provide equivalent anchoring system as approved by the Engineer.

Following final completion of the project, Contractor shall disassemble the signs and return the owner-provided materials to 5701 Northwood Drive. This Work shall be considered incidental to the project.

Article 4.23 Responsibility of Contractor to Act in Emergency

In case of an emergency that threatens loss and/or injury of property and/or safety of life, the Contractor shall act, without previous instructions from the Engineer, as the situation may warrant. The Contractor shall notify the Engineer thereof immediately thereafter. Any claim for compensation by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the Owner through the Engineer. The amount of compensation shall be determined by agreement.

The Contractor shall supply the Engineer, prior to commencement of Work, with an emergency telephone number through which a responsible Contractor's representative can be contacted on a twenty-four (24) hour a day basis, seven (7) days a week.

Article 4.24 Coordination with Other Projects in the Area

It shall be the responsibility of the Contractor to coordinate with and minimize impact to other projects in the area including, but not limited to, the following:

1. Utility Relocation/Protection Work by others, per Section 10.04.17 of these Special Provisions.

The Contractor shall be responsible for affirmatively coordinating with other projects in the area so as to not unreasonably interfere with the performance of the other projects.

If the Work of the Contractor is delayed or disrupted because of the construction or transportation activities of other projects in the area, the Contractor shall not be entitled to additional compensation from the Owner, but may be entitled to an extension of time in accordance with Article 5.23 – Delays and Extension of Time.

Except with regard to a possible entitlement to an extension of time, the Contractor shall hold harmless, defend, and indemnify the Owner from and against any and all claims by the Contractor arising directly or otherwise out of the other projects in the area.

Work required to coordinate with and minimize impact to other work in the Project area shall be considered incidental to the Project.

Article 4.25 Payment for Common Work Items

The following Common Work Items may be necessary for more than one Work Schedule within the project Base Bid. For these Common Work Items, all of the necessary Work for all Schedules in the Base Bid will be considered part of Schedule A - Roadway Improvements.

MASS Section	Common Work Item	
20.02	Storm Water Pollution Prevention Plan (Type 3)	
20.04	Clearing and Grubbing	00,00
65.02	Construction Survey Measurement	2VV
70.12	Traffic Maintenance	

The following Common Work Items may be necessary for more than one Work Schedule within the project Base Bid. For these Common Work Items, all of the necessary Work for all Schedules in the Base Bid will be considered part of Schedule B – Drainage Improvements.

MASS Section	Common Work Item
55.27	Storm Drain Bypass System

SECTION 10.05 CONTROL OF WORK

Article 5.27 Liquidated Damages

Add the following paragraph:

The Owner may withhold from any progress payment the sum of Five Hundred Dollars (\$500.00) per day as Liquidated Damages for each and every calendar day that the Substantial Completion Date is delayed beyond Contract Completion Date. The Owner may withhold out of any progress payment the sum of Five Hundred Dollars (\$250.00) per day as Liquidated Damages for each and every calendar day that the Final Acceptance Date is delayed beyond the Contract Completion Date. If no money is due Contractor, the Owner will have the right to recover said sums from Contractor, the Surety, or both.

Article 5.31 Winter Suspension

C. Suitable Conditions for Winter Maintenance

Add the following paragraphs:

8. Contractor shall install temporary flexible delineators at the end of culverts, end of retaining walls, field inlets, and other locations as determined by the Engineer.

Add the following Article:

Article 5.34 Work Plan

Contractor shall prepare a Work Plan for approval by the Engineer prior to beginning construction. The goals of the Work Plan shall include the following:

- Maintain a safe transportation corridor through the project area for vehicles and pedestrians.
- Minimize impacts to existing utilities and protect existing utilities where required.
- Minimize impacts to vehicular and pedestrian traffic.
- Minimize impacts to operations at AWWU facilities.
- Coordinate with and minimize impacts to other Contractors working in the area.
- Minimize dust and erosion generated by Construction activities.
- Minimize overall construction noise.
- Finish the project within the time of completion requirement.

Contractor shall submit a project Work Plan for approval by the Engineer within seven (7) days after signature of the Contract. Contractor shall coordinate the Work Plan with the Traffic Control Plan, Dewatering/Trench Dewatering Plan, SWPPP Plan, Storm Drain Bypass System Plan, Creek Diversion Plan and adhere to all permit requirements. Work shall not proceed until the Engineer has approved in writing the Work Plan. The Work Plan shall include estimated dates of completion for each significant element of Work.

No separate payment shall be made for the Work described in this Article and all Work required to provide an approved Work Plan is incidental to the Contract. The Work Plan shall be updated as the work progresses.

At a minimum, the Work Plan shall include the following requirements:

A. The Project shall be divided into 3 phases:

Phase 1 shall consist of:

- Conference with the Engineer and Contractor's Arborist to review tree protection procedures and responsibilities and install temporary tree protection fencing.
- Performing utility test pits for utility locates to determine elevations of existing utilities at locations as determined by the Engineer in the field.
- Phase 2 shall consist of all work, except for landscaping, as identified by the Contractor that can be completed in total before winter suspension.

- Phase 3 shall consist of all work that is not included in Phase 2.
- B. Phase 1 shall be completed prior to beginning any other construction within an individual phase other than removal of existing asphalt surfacing.
- C. Activity in a Phase, including demolition and/or construction, shall not begin until after receiving written approval from the Engineer. Minor work necessary to prepare a Phase prior to active construction, such as utility relocation and similar construction, may take place outside of the current active Phase upon written authorization of the Engineer and only if the asphalt surfacing is maintained. Asphalt surfacing removed in any area in an inactive Phase shall be replaced with temporary asphalt or RAP surfacing within 48 hours of asphalt removal.
- D. Incidental Work beyond the edge of the existing roadway, that does not impact traffic flow, is allowed in areas outside of the active construction Phase with written approval from the Engineer.
- E. A transition between Phases shall be constructed in order to maintain a consistent, smooth, and safe grade for the traveling public between the new and old roadway surfaces. The transition work may require temporary regrading, pavement surfacing or curb and gutter. The actual limits of the transition area will be as directed by the Engineer. Work and materials necessary to provide transitions or temporary roadway surfacing including backfill, asphalt, or curb and gutter shall not be measured separately and shall be considered incidental to the pay item "Traffic Maintenance".
- F. Disruption of driveways shall be kept to a minimum. Driveway surfacing shall not be removed until necessary for excavation or regrading. Contractor shall provide and maintain access to all adjacent properties and side streets in accordance with M.A.S.S. 10.04.10 and 10.04.12.
- G. Contractor shall provide for emergency vehicle access at all times in accordance with M.A.S.S 10.04.10.
- H. The Contractor shall protect existing surfaces located beyond the limits of the proposed improvements identified in the demolition plan.
- I. Contractor shall maintain at least two lanes, two-way traffic along the areas of the project except within the active construction phase. Contractor shall not allow traffic delays in excess of 10 minutes per incident unless a full road closure is approved.
 - Contractor shall coordinate with utility companies performing other work in the project area as described in Section 10.04.17. The utility work schedule may require that the Contractor perform some work tasks, including implementing the SWPPP Plan, removing fences, and installing temporary fences outside of the active Work zone.
- K. Contractor shall provide for uninterrupted utility service to nearby residents and shall accommodate trash collection, paper delivery and mail delivery in a manner satisfactory to the utility provider.

L. Contractor shall provide proper notification to residents of impending construction activities. Contractor shall provide residents with contact name(s) and phone number(s) for Contractor personnel with responsibility to inform and coordinate with residents. The Contractor shall give written notice to the residents of any adjacent property having direct driveway or parking access to the project area, 48 hours in advance of installing curb and gutter, sidewalk, or approach aprons across the driveway, or driveways serving the adjacent property. 10120

SECTION 10.06 LEGAL RELATIONS AND RESPONSIBILITIES

Article 6.1 Laws to be Observed

Add the following paragraph:

Owner is not aware of any contaminated material within the project limits. If such material is encountered, Contractor shall notify the Engineer immediately for direction. This will be treated as a changed condition, unless the contamination was caused by Contractor's operation.

Article 6.6 **Permits**

Add the following paragraphs:

The Municipality plans to attain Temporary Construction Permits and easements from property owners for the purpose of constructing the proposed improvements on or near adjacent property. These permits are included in Section VI, Temporary Construction Permits and Easements.

The Contractor shall confine his operations to the existing right-of-way, existing easements, or designated Easements/Temporary Construction Permit areas. The Contractor shall comply with all special conditions, stipulations and restrictions thereof. Prior to the start of construction, the Contractor shall verify that all easements and permits necessary for construction of the project have been obtained. The Contractor shall have a copy of all permits on the job site at all times.

The Contractor shall comply with the terms of the Temporary Construction Permits. The permits are granted for the construction of the improvements as shown on the Drawings. The Contractor shall not use the permitted areas for any other construction activities including stockpiling materials, storing equipment, or performing equipment maintenance.

No private property within the permitting areas shall be damaged except as necessary to construct the proposed improvements and the Contractor shall repair or replace damaged property to pre-project conditions to the satisfaction of the Engineer.

The Contractor shall order the Work such that the permitted areas are occupied only for brief intervals and that the permitted construction is progressing at a normal rate during the time the areas are occupied.

The Engineer reserves the right to limit the Contractor access and use of the permitted areas.

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard MOA PM&E Project No. 16-29

PRELIMMARY SUBMITIAL. NOTFOR CONSTRUCTION MOV 2019)

Β. **DIVISION 20** STANDARD CONSTRUCTION SPECIFICATIONS FOR EARTHWORK

SECTION 20.01 GENERAL

Article 1.6 Subsurface Investigation

Add the following paragraph:

The soils information for the project is located in Section V.

11012019 SECTION 20.02 STORMWATER POLLUTION PREVENTION PLAN

Article 2.1 General

Add the following paragraph:

Utilities: Utilities will be relocated/protected in place by others concurrently with construction of this project. All utility companies performing ground disturbing activity on the project shall be identified in the SWPRP. The Contractor shall be responsible for controlling sediment and erosion and stabilizing areas disturbed during all underground and overhead utility relocation/removal/protection work.

Article 2.14 **Construction Requirements**

Prior to Construction Α.

Add the following item:

Coordinate with each utility company prior to submitting the SWPPP to 9. determine scope of utility relocation/removal/protection work and schedule for relocation/removal/protection work. The SWPPP shall identify any ground disturbing activity in the project area by the utility company and shall include a detailed plan to prevent pollution and minimize erosion by the utility's work effort.

Delete Section 20.03 Exploratory Test Pits in its entirety and replace it with the following:

SECTION 20.03 EXPLORATORY TEST PITS FOR UTILITIES

Article 3.1 General

Work under this Section consists of furnishing an excavator, vactor truck, operators, surveyors and all related supplies/materials in order to excavate and fill test pits for locating and surveying the location of utilities as directed by the Engineer prior to the commencement of below grade construction activities.

Article 3.2 **Materials**

Contractor shall furnish an excavator and vactor truck capable of excavating to a maximum depth of twelve feet (12').

Article 3.3 Construction

Contractor shall excavate to locate utility as directed by the Engineer. Engineer shall be on site during duration of exploratory test pit for utility work. Excavation shall be accomplished with vactor truck unless otherwise directed by the Engineer. Contractor shall be responsible for coordinating with and calling for utility companies to mark the location of the utility in question prior to excavation.

Once utility is located and exposed, Contractor shall survey the horizontal and vertical location of the utility and provide the data to the Engineer. Excavated material shall be disposed of by the Contractor.

After excavation and location of the utilities is complete, Contractor shall backfill test pits with Type II Classified Fill and compact them so that the ground is returned to its original condition. If directed by the Engineer, Contractor shall segregate the cast piles to avoid contamination. Excavations in roadways shall be capped with AC pavement placed to match surrounding pavement.

Contractor shall locate utilities at locations as determined by the Engineer in the field.

Article 3.4 Measurement

Work performed under this Section is measured per hour for utility location completed as directed by the Engineer. Pay Item shall include all Work related to excavating test pits for locating utilities including coordination, preparation, excavation, survey, Type II Classified Fill and Backfill, compaction, AC pavement, traffic control, disposal of excavated materials and any other ancillary items necessary to complete the Work. Down time or delays caused by equipment failure is not included in the measurement and no additional payment shall be made.

Article 3.5 Basis of Payment

Payment for Work shall be in accordance with Division 10, Section 10.07 – Measurement and Payment, and shall include full payment for all Work described in this Section.

Payment shall be made under the following item:

UNIT

Test Pit for Utility Locate

ITEM

Hour

SECTION 20.04 CLEARING AND GRUBBING

Article 4.2 Construction

Delete this Article in its entirety and replace with the following:

The Contractor shall do all clearing and grubbing necessary in the construction of roadways, sidewalks, landscaping, storm drainage, culverts, temporary creek diversion, utilities & other work shown on the Drawings. Prior to clearing and grubbing, the Contractor shall stake the clearing limits per Section 20.04, Article 4.2.A below. Trees, brush, roots and root mat removed in the clearing, and

grubbing operations shall be hauled to a disposal site provided by the Contractor as delineated in Division 10, Section 10.04, Article 4.9 – Disposal Sites.

A. Clearing Limits

The Contractor shall clearly delineate the limits of clearing and grubbing using survey staking and tape. Limits of Clearing and Grubbing shall be as shown on the Drawings. After the site has been staked for clearing limits, the limits shall be field verified jointly by the Engineer, the Contractor and the Contractor's Arborist. No clearing shall begin until written approval for the clearing limits is given by the Engineer. Written approval for clearing will not be provided in advance of joint field verification of clearing limits. Damage associated with the removal of trees shall be kept to a minimum practical area within the approved limits. The Engineer reserves the right to adjust clearing limits by up to eight feet to save trees or up to eight feet to remove trees. The Engineer may elect to alter grades, or adjust the plans to save trees. No additional payment will be made for clearing limits adjusted in the field either during the initial staking or for additional clearing required beyond the limits shown on the Drawings as required for Contractor to complete the Work. The Contractor shall provide the Engineer a minimum of 24 hours of notice following delineation of the clearing limits and prior to starting clearing operations. Clearing operations shall not be commenced or continued in the absence of the Engineer.

For existing trees to remain, that are in close proximity to the clearing limits, the Contractor shall establish a Tree Protection Zone (TPZ) with temporary tree protection fencing as shown on the Drawings and as specified in Section 75.12. Ensure that the temporary fencing associated with tree protection zones is clearly visible throughout the duration of the project. Work required to delineate the clearing and grubbing limits shall be considered incidental to other work in this section and will not be paid for separately. Work required to establish tree protection zones and install temporary tree protection fencing is addressed in Section 75.12. Root pruning is addressed in Section 75.13.

All trees cut within the clearing limits shall be felled and dropped into the areas where clearing and grubbing is to occur. Trees shall not be felled into areas outside the clearing limits. All trees and brush shall be disposed of off-site.

Any trees removed outside of the approved clearing limits shall be replaced by the Contractor with new trees of similar species and of the largest practical size similar to the tree removed in increments of either 3-inch caliper (deciduous) or 6-foot height (evergreen). For example, a 12-inch caliper birch tree shall be replaced with four 3-inch caliper birch trees. A 20foot tall spruce tree shall be replaced with four 6-foot tall spruce trees. All replacement trees shall meet specifications and shall be included in the maintenance period. Contractor shall not be entitled to any additional payment for trees replaced outside of the clearing limits. Any trees larger than 4-inches in diameter, approved in advance for cutting and removal, shall be limbed and sawed into 4-foot lengths and hauled off site and properly disposed of, unless directed by the Engineer to be neatly stacked on-property.

B. Migratory Bird Treaty Act

Tree removal scheduling must comply with the Migratory Bird Treaty Act. The habitat avoidance window for nesting song birds is May 1 to July 15. The window for raptors and ravens is April 10 to August 10. Additionally, Contractor shall notify the Engineer immediately if any active nests are found at any time during construction of the project.

SECTION 20.07 REMOVAL OF SIDEWALK AND CONCRETE APRON

Article 7.4 Basis of Payment

Add the following pay item:

ITEM

Remove Sidewalk or Concrete Apron

UNIT Square Yard

SECTION 20.09 REMOVAL OF PAVEMENT

Article 9.1 General

Add the following to the first paragraph after the word 'pavement':

...or RAP

Article 9.2 Construction

Delete the second paragraph and replace with the following:

Contractor shall keep pavement including asphalt concrete and RAP which is designated for removal free from objectionable material (concrete, steel, etc.) and shall dispose of pavement, asphalt concrete, and RAP designated for removal at the Kloep Maintenance Station, 5701 Northwood Street. Contractor shall coordinate exact location and time of delivery with Paul VanLandingham with MOA Street Maintenance at 343-8372 or 317-7054. If the removed pavement material under this Section contains objectionable material, as identified by the Engineer, then Contractor shall dispose of this material in accordance with Division 10, Section 10.04, Article 4.9 – Disposal Sites at no additional cost to MOA.

SECTION 20.10 EXCAVATION FOR TRAFFIC WAYS

Article 10.1 General

Replace the first paragraph with the following paragraph:

The Work under this Section consists of furnishing all plant, labor, equipment, supplies, and material in performance of all operations pertaining to the excavation of unsuitable and/or surplus material for street, alleys, access roads, parking lots, sidewalks, curbs, gutter, and pathways.

SECTION 20.11 GRADING EXISTING SURFACES

Delete this Articles 11.3 and 11.4 in their entirety and replace it with the following:

Article 11.3 Measurement

Grading of existing surfaces as shown on the Drawings or as necessary to maintain positive drainage patterns shall be considered incidental to the contract and no separate measurement for payment shall be made. 101201

SECTION 20.13 TRENCH EXCAVATION AND BACKFILL

Article 13.2 Trench Excavation and Backfill - Description

Add the following paragraph after the fifth paragraph:

Payment to the Contractor for Work resulting from any trench excavation required for this project, whether paid for on a cubic yard, ton, or linear foot basis, shall not exceed the pay limits as shown on the Contract Drawings.

E. Locator Tape

Delete the fourth sentence and replace with the following:

The Contractor shall install the locator tape at least 18 inches but no more than 36 inches above the crown of the pipe.

SECTION 20.21 CLASSIFIED FILL AND BACKFILL

Article 21.2 Material

Add the following paragraph after the second paragraph:

Crushed waste glass (cullet) may be combined with soil-aggregate material and used in Type II or Type II-A classified fill and backfill. If glass cullet is incorporated, classified fill and backfill shall contain not more than ten percent (10%) by weight glass cullet smaller than three-eighths-inch (3/8"). Contractor shall ensure that glass cullet is uniformly blended with natural soil aggregate material prior to project delivery and placement. Glass cullet must conform to the specifications in SubArticle G -Glass Cullet of this Article. In addition to the normal gradation documentation for classified fill or backfill, when glass cullet is used the Contractor shall provide documentation certifying that the glass cullet (1) is comprised only of eligible types of glass, (2) does not contain prohibited materials, (3) meets debris content requirement, and (4) meets blending percentage requirements to the Engineer prior to placement of the material.

Add the following SubArticle G:

G. Crushed Waste Glass (Cullet)

Glass cullet shall be free of prohibited or hazardous substances and the cullet shall contain no more than two percent (2%) debris as determined in AASHTO M318.

Eligible glass products from which glass cullet may be produced include:

food and beverage container glass;

- plain ceramic or china dinnerware; and
- building window glass.

Prohibited glass products include:

- automobile windshields or other glass from automobiles;
- light bulbs of any type;
- porcelain products;
- laboratory glass; or
- television, computer, or other cathode ray monitor tubes.

Article 21.3 Construction

Add the following after the last paragraph:

Contractor shall not use classified fill and backfill incorporating glass cullet:

- within 4 feet (4') from the face of any embankment slope;
- within one hundred and fifty feet (150') of any surface water body;
- in embankment areas where culvert placement is required;
- in contact with any geotextile or geosynthetic material; or
- in any soil-aggregate base or subbase courses that are not covered by surfacing material.

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Article 21.4 Measurement

Add the following after the last paragraph:

Use of glass cullet is incidental to the bid item Classified Fill and Backfill and no additional payments shall be made.

SECTION 20.22 LEVELING COURSE

Article 22.2 Material

Add the following paragraph after the second paragraph:

Crushed waste glass (cullet) may be combined with soil-aggregate materials and used in leveling course. If glass cullet is incorporated, leveling course shall contain not more than ten percent (10%) by weight glass cullet smaller than three-eighthsinch (3/8"). Contractor shall ensure that glass cullet is uniformly blended with natural soil aggregate material prior to project delivery and placement. Glass cullet must conform to the specifications in SubArticle D – Glass Cullet of this Article. In addition to the normal gradation documentation for classified fill or backfill, when glass cullet is used the Contractor shall provide documentation certifying that the glass cullet (1) is comprised only of eligible types of glass, (2) does not contain prohibited materials, (3) meets debris content requirement, and (4) meets blending percentage requirement to the Engineer prior to placement of material. Upon written approval by the Engineer, recycled concrete aggregate (RCA) may be substituted for leveling course, on an inch for inch basis. RCA shall conform to this specification.

Add the following SubArticles:

D. Crushed Waste Glass (Cullet)

Glass cullet shall be free of prohibited or hazardous substances and the cullet shall contain no more than two percent (2%) debris as determined in AASHTO M318.

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Eligible glass products from which glass cullet may be produced include:

- food and beverage container glass;
- plain ceramic or china dinnerware; and
- building window glass.

Prohibited glass products include:

- automobile windshields or other glass from automobiles;
- light bulbs of any type;
- porcelain products;
- laboratory glass; or
- television, computer, or other cathode ray monitor tubes.
- E. Recycled Concrete Aggregate

RCA shall consist of a manufactured aggregate material and natural aggregate particles derived from the crushing, processing, and classification of Portland cement concrete construction debris recovered from roadways, sidewalks, building, bridges and other sources, which conforms to AASHTO M-319 - Reclaimed Concrete Aggregate for Unbound Soil-Aggregate Base Course, and this specification. This material shall not contain deleterious substances in excess of the following amounts by mass-weight:

Deleterious Material	<u>%, By weight</u>
Bituminous concrete materials	5%
Brick or concrete masonry unit block	5%
Solid waste or hazardous materials	0%
Wood,metal,plaster,gypsum	0.1%

Both Coarse and Fine Aggregate shall conform to this specification and the quality requirements from AASHTO M-147 - Materials for Aggregate and Soil-Aggregate Subbase, Base, and Surface Courses. Additionally RCA shall have a minimum of seventy percent (70%) of particles with one or more mechanically fractured faces when the RCA is tested in accordance with AASHTO TP-61.

The Maximum Moisture Content is four percent (4.0%) for RCA.

The RCA Liquid Limit shall not exceed 35 when tested in accordance with AASHTO T-89 and the Plasticity Index of the fraction of RCA passing the No. 40 sieve shall not exceed 6 when tested in accordance with AASHTO T-90.

In accordance with ASTM 306, the percent of flat and elongated pieces in RCA shall not exceed eight percent (8%).

Restrictions to Use of Recycled Concrete Aggregate: RCA shall not be placed over a geotextile layer, gravel drain fields, drain field piping, subdrains, or open soil-lined stormwater retention or detention facilities, because soluble minerals rich in calcium salts and calcium hydroxide can be hydraulically transported from the recycled concrete aggregate. RCA is not approved for use within five feet (5') of metal culverts due to its high alkalinity and because recycled concrete aggregate in contact with aluminum or galvanized steel pipes can cause corrosion in the presence of moisture.

Article 22.3 Construction

Insert the following paragraph at the end of subArticle C Placing:

If used, any portion of the RCA which becomes segregated and/or develops zones of paste or crushed conglomerates during the distribution/compaction process shall be corrected by the Contractor. This correction process shall be conducted full depth and continue until the on-grade RCA meets this specification. The Engineer reserves the right to sample (or resample) the RCA for acceptance after it has been placed, watered and compacted.

Add the following SubArticle F:

F. Crushed Waste Glass (Cullet)

Contractor shall not use classified fill and backfill incorporating glass cullet:

- within 4 feet (4') from the face of any embankment slope;
- within one hundred and fifty feet (150') of any surface water body;
- in embankment areas where culvert placement is required;
- in contact with any geotextile or geosynthetic material; or
- in any soil-aggregate base or subbase courses that are not covered by surfacing material.

Article 22.4 Measurement

Remove the first sentence and replace with the following:

The leveling course shall be measured in tons of materials delivered and placed in accordance with these Specifications and adjusted for excess moisture as provided.

Add the following after the last paragraph:

Use of glass cullet or recycled concrete aggregate is incidental to the bid item Leveling Course and no additional payments shall be made.

SECTION 20.26 INSULATION

Article 26.2 **Materials**

Add the following sentence after the first sentence:

Insulation board shall be provided in one inch-thick increments as required to meet the specified R-Value. Insulation board provided with fractional inch thickness shall be rejected. 1201

SECTION 20.28 RECONSTRUCT DRIVEWAY

Article 28.3 Construction

Add the following in the second sentence of the third paragraph after the word "asphalt":

(Class E)

Replace the second sentence of the sixth paragraph with the following:

Contractor shall notify and coordinate with the affected resident(s) a minimum of 48 hours prior to any necessary driveway work.

Article 28.4 Measurement

Delete this Article in its entirety and replace with the following:

Driveway reconstruction shall not be measured separately for payment. Measurement and payment for unusable excavation, classified backfill, geotextile fabric, insulation, leveling course, PCC concrete, and asphalt will be made under the appropriate pay items. No payment shall be made for temporary relocation of driveways or required driveway maintenance during construction. Removal and replacement of vegetation, structures, landscaping, planting beds, retaining walls and other private improvements, on private property or within the right-of-way, as is necessary to reconstruct driveways shall be considered incidental to the Project and no additional payment shall be made unless otherwise noted.

SECTION 20.30 SHORING, SHEETING, AND BRACING/SHORING AND SHEETING LEFT IN THE TRENCH AND PORTABLE

Article 30.1 General

Add the following:

The Work under this Section also includes all operations necessary to shore, brace and protect from harm existing utilities located within the project area. Utilities include underground facilities as well as overhead facilities and supporting structures.

The Work under this Section also includes all operations to furnishing and installing temporary or permanent sheeting, shoring, and bracing to support temporary excavations behind retaining walls to prevent any movement that might damage adjacent facilities, structures, or injure workman or the public.

Article 30.3 Construction

Add the following:

The shoring shall be sufficient to avoid impacting areas or facilities outside of the existing ROW, PUEs or TCPs. Methods and materials used to shore or brace utilities shall be reviewed and approved by the affected utility company before it is submitted to the Engineer for approval.

The Contractor shall prepare and submit to the Engineer for approval a Shoring Plan. The Shoring Plan shall be submitted a minimum of three (3) working days prior to work involving shoring. The Shoring Plan shall detail the methods and materials to be used for trench shoring as well as utility pole shoring, if necessary. The Plan shall be prepared by and sealed by a Professional Engineer registered in the State of Alaska.

When, in the opinion or the Engineer or affected utility company, shoring is inadequate, improper, or conditions exist such that damage may occur, the Contractor shall be notified in writing by the Engineer. Such notification shall be accompanied by a statement of corrective action. If the Contractor fails to promptly comply with such instruction, the Engineer may suspend any or all Work on the project until satisfactory corrective action is taken. Notification or lack of notification shall in no way relieve the Contractor of the responsibilities established in Section 10.04, Subsection 4.17 – Utilities.

C. DIVISION 30 STANDARD CONSTRUCTION SPECIFICATIONS FOR PORTLAND CEMENT CONCRETE

SECTION 30.01 GENERAL

Article 1.3 Materials

B. Welded Steel Wire Fabric

Add the following paragraph:

Welded Steel Wire Fabric shall be used in all concrete driveways and in sidewalks at all driveway crossings and shall be 6x6-W4.0xW4.0.

SECTION 30.03 PORTLAND CEMENT CONCRETE SIDEWALKS

Article 3.4 Measurement

Add the following Sentences:

Welded Steel Wire Fabric in concrete sidewalks and driveways shall be considered incidental to the P.C.C. Sidewalk Pay Item and no separate measurement or payment shall be made.

SECTION 30.04 PORTLAND CEMENT CONCRETE CURB RAMPS

Article 4.1 General

Add the following Sentence:

The Work covered under this Section shall also include construction of backing curb, as required.

Article 4.2 Materials

Add the following Subsection:

C. Backing Curb

Backing curb materials and installation shall conform to the requirements of MASS Section 30.02 Portland Cement Concrete, Curb and Gutter and Valley Gutter, the Drawings, details and these specifications. Location and height of backing curb shall be as required to retain the neighboring ground, as approved by the Engineer.

Article 4.5 Measurement

Add the following paragraph:

The Work paid for under "P.C.C. Curb Ramp (6" Thick)" shall be measured as 6" thick curb ramp as furnished, constructed, finished and accepted in place for the actual square yardage of curb ramp (including curb ramp under detectable warnings) and backing curb.

Article 4.6 Basis of Payment

Add the following to the second paragraph:

No separate payment shall be made for backing curb. Backing curb shall be incidental to the contract.

Add the following pay item:

ITEM

P.C.C. Curb Ramp (6" Thick)

UNIT Square Yard

SECTION 30.05 STRUCTURES AND RETAINING WALLS

Article 5.3 Measurement

Add the following paragraph:

Fence post sleeves cast into retaining walls shall not be measured for payment and shall be incidental to the P.C.C. Retaining Wall (Class AA-3) Pay Item.

SECTION 30.10 COLORED CONCRETE

Article 10.2 Materials

A. Concrete

Replace the paragraph entirely with the following:

Concrete mix for colored concrete shall conform to M.A.S.S. requirements for Class AA-3, normal weight concrete. Coloring shall be integral for the full depth of the concrete. It shall be added at the redi-mix concrete manufacturer plant per the manufacturer's instructions and uniformly distributed throughout the mix.

Red concrete shall be made from integral color pigment "Baja Red" RG-2827R 6% (of cement material) as manufactured by Interstar or approved equal. The red color noted above may be modified by the Engineer. No separate payment shall be made if the red color is modified to color as requested and approved by the Engineer. Contractor shall submit color for approval by Engineer prior to ordering material.

Add the following Subsections:

D. Sealer

Sealer shall be a water-based acrylic sealer designed to provide UV protection, waterproofing, and chemical resistance. Sealer shall be manufactured by Interstar or approved equal.

E. Broom Finish

Where broom finish is called for on the Drawings, Contractor shall provide a standard broom finish.

Article 10.3 Construction

Add the following paragraphs at the end of this Article:

Where Broom Finish is called for on the Drawings, Contractor shall finish the concrete as follows: After final finishing of the concrete surface with wood and steel floats the surface shall be brushed with a fiber hair brush. The brushing shall be performed transverse to the predominant direction of pedestrian travel. The resulting surface shall be smooth with a linear texture resulting in a slip-resistant surface.

All colored concrete shall be sealed in accordance with the manufacturer of the sealer product. It may be necessary to seal the concrete approximately 28 days after the concrete has cured.

All vehicular traffic shall be kept off the colored concrete slab for the entire cure period. Pedestrian traffic may be allowed to travel on the concrete after 3 days upon approval by the Engineer. Concrete shall be protected against damage or defacement of any kind until it has been accepted by the Owner. Concrete which is not acceptable to the Engineer because of damage or defacement shall be removed and replaced at no additional cost to the Owner.

Install Welded Steel Wire Fabric in all colored concrete driveways.

Article 10.4 Measurement

Add the following paragraph:

Welded Steel Wire Fabric, sealers and other miscellaneous items required for colored concrete driveways shall be considered incidental to the Colored Concrete Pay Item and no separate measurement or payment shall be made.

Article 10.5 Basis of Payment

Add the following pay items:

ITEM

RELIMINAR

Colored Concrete (Thickness, Color, Finish)

UNIT

Square Yard

D. DIVISION 40 STANDARD CONSTRUCTION SPECIFICATIONS FOR ASPHALT SURFACING

SECTION 40.01 GENERAL

Add the following Articles:

Article 1.7 Asphalt Price Adjustment

1012019 This provision provides a price adjustment for asphalt material by:

- 1. an increase to the contract amount, or
- 2. a deduction from the contract amount.

The provision shall apply to asphalt concrete pavement which:

- is a major bid item as defined in M.A.S.S. Division 10, Section 10.04, Article 4.5 – Increased Quantities:
- is placed in the second or later year of the contract;
- conforms to M.A.S.S. Division 40, Section 40.06 Asphalt Concrete Pavement: and
- is paid pursuant to M.A.S.S. Division 40, Section 40.06 Asphalt Concrete Pavement

This provision shall only apply to cost changes in the asphalt material that occurs between the date of bid opening and the date the asphalt material is incorporated into the project.

The asphalt price adjustment shall only apply when there is more than a seven and one-half percent (7.5%) increase or decrease in the Alaska Asphalt Material Price Index from the date of the bid opening to the date the asphalt material is incorporated into the project.

As used in this Article, the Alaska Asphalt Material Price Index is calculated bimonthly on the first and third Friday of each month, and will remain in effect from the day of calculation until the next bi-monthly calculation. The Alaska Asphalt Material Price Index is posted on the ADOT&PF's Statewide Materials website and is calculated according to the formula posted therein.

The Asphalt Price Adjustment (APA) payment is cumulative and is calculated with each progress payment. Asphalt material price index in effect on the last day of the pay period is used to calculate the price adjustment for asphalt material incorporated into the project during that pay period. The Municipality will increase or decrease payment under this contract by the amount determined with the following asphalt material price adjustment formula:

APA {price increase/decrease}* = [(\pm IPP \mp IB) - (0.075 * IB)] *Q *% AC

Where,

Q = quantity of asphalt concrete pavement incorporated into the project during the pay period, in tons, and documented by weight tickets;

IB = Index at bid: the bi-monthly Alaska asphalt material price index in effect on date of bid, in dollars per ton;

IPP = Index at Pay Periods: the bi-monthly Alaska asphalt material price index in effect on the last day of the pay period, in dollars per ton; and

%AC = percentage asphalt cement content in the asphalt concrete pavement, as determined by the average asphalt cement content in project's asphalt concrete quality control testing.

*Note: a negative price adjustment (APA) results in a price reduction to the Contract.

Method of measurement for determining quantity, Q, is the weight of asphalt concrete pavement material that conforms to M.A.S.S. Division 40, Section 40.06 – Asphalt Concrete Pavement and is incorporated into the project.

No asphalt price adjustment will be paid based on estimated quantities.

Contingent Sum payment shall be made on the following basis:

The final asphalt price adjustment on a project is the aggregate of the price adjustments paid on a project's respective progress pay estimates, i.e.,

 $APA = APA_1 + APA_2 + \dots + APA_n$

Where n = partial payment estimate number.

SECTION 40.04 TACK COAT

Article 4.5 Measurement

Delete this Article in its entirety and replace with the following:

Tack Coat shall not be measured as it is considered incidental to pay Item 40.06 – Asphalt Concrete Pavement.

Article 4.6 Basis of Payment

Delete this Article in its entirety.

Ε. STANDARD CONSTRUCTION SPECIFICATIONS FOR **DIVISION 50** SANITARY SEWERS

SECTION 50.06 EXISTING MANHOLE MODIFICATIONS

Article 6.5 Measurement

Sanitary sewer cleanouts to be removed shall be measured per each unit removed and properly disposed of at a Contractor provided disposal site or if cleanout is salvageable it shall be delivered to the Utility Company's Operation and Maintenance Yard.

Basis of Payment Article 6.6

Add the following pay items:

ITEM

PRELIMMARY SUBMITTAL MOTEOR CONSTR Remove and Replace Manhole Cover and Frame

Each Each

Each

UNIT

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard MOA PM&E Project No. 16-29

F. DIVISION 55 STANDARD CONSTRUCTION SPECIFICATIONS FOR STORM DRAIN SYSTEMS

SECTION 55.02 FURNISH AND INSTALL PIPE

Article 2.2 Material

A. General

Add the following:

Concrete thrust blocks are required on all bends, tees, and deflections in storm drain pipe. Thrust blocks shall be in accordance with MASS Standard Detail 60-06.

Article 2.3 Construction

A. Excavation and Backfill

Add the following:

A trench box shall be used for all open trenching for storm drain pipe to limit the extents of excavation and impacts to adjacent property and vegetation. Furnishing and installing trench box shall be incidental to the project.

Article 2.4 Measurement

Add the following:

This Work includes the following MASS Work items:

Mechancial Compaction

No separate payment for the above Work items will be made since they will be considered incidental to the Work included in this Section.

Furnishing and installing thrust blocks is considered incidental to the Work described in this Section and no separate payment shall be made

SECTION 55.04 CONNECTIONS TO EXISTING MANHOLES OR CATCH BASINS

Add the following:

The Work under this Section shall also include the performance of all operations pertaining to the construction required for connections to existing storm drain pipes.

Article 4.3 Measurement

Delete this Article in its entirety and replace it with the following:

Connection to existing storm drain systems (pipes, manholes and/or catch basins) shall be measured as complete units in place.

Reconstruction of existing manhole penetrations for installation of new pipe and plugging existing unused holes in manhole from removed pipe is considered incidental to the pay item and no separate payment shall be made.

Article 4.4 **Basis of Payment**

Add the following Pay Item:

ITEM

Connect to Existing Storm Drain System

UNIT Each

SECTION 55.05 MANHOLES AND CATCH BASIN MANHOLES

Article 5.1 General

Add the following sentence to the first paragraph:

MM012019 The Work also includes constructing bypass manholes complete with a gate, frames and cover. NSTR

Article 5.2 **Materials**

Add the following:

RELIMIT

C. Bypass Manhole and Gate

> The bypass manhole shall meet the previous sub-sections of Article 5.2 and contain a bypass gate that shall meet the following criteria:

- 1. The bypass gate shall be provided by the following manufacturer as indicated on the Drawings:
 - a. CL-10 Canal Gate as manufactured by Waterman Valve, LLC, or approved equal.
 - b. The bypass gate must have a non-rising stem such that the handwheel operator remains in static operating position within manhole when opening and closing gate and not interfere with manhole cover.
 - The bypass gate must have a flat back frame (Type F) to attach to manhole mounting surface.
 - d. The bypass gate components must have galvanized finish.
 - The bypass gate mounting surface shall be cast by the manhole manufacturer.
- 6. The bypass gate shall be installed by the manhole manufacturer.
- 7. When the gate is open, the complete size of the outlet pipe must be unobstructed.
- 8. The bypass gate must have a lift mechanism that can be operated by a single person standing outside of the manhole using both hands.

9. Two access points shall be provided for the manhole as shown in the Drawings. One access point provides access to operate the lift mechanism for the bypass gate. The second access point provides personnel access for cleaning and maintenance. Each access point must comply with MASS standard details.

Article 5.3 Construction

B. Storm Drain Manholes and Catch Basin Manholes

Add the following paragraph after the first sentence in the first paragraph:

Catch Basin Manholes shall be constructed as detailed in the Drawings with manhole access and catch basin functionality. All construction details and requirements not specified in the Drawings that are associated with Catch Basin Manholes shall be per M.A.S.S. Standard Details and Standard Specifications.

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Delete the second paragraph and replace it with the following:

After connecting the storm drain pipe to reinforced concrete manhole or catch basin, seal annular space around pipe penetrations with cement mortar or boot style connector, or approved equal. Cement mortar shall conform to the requirements of ASTM C-150, Type II. Boot style connector shall conform to the requirements of this Section. After the mortar has firmly set, Contractor shall cut the pipe evenly so that no more than two inches (2") of the pipe protrudes into the manhole. Boot style connectors shall be installed at all locations where watertight storm drain pipe connects to manholes.

Add the following:

C. Bypass Manhole

Bypass Manhole shall be constructed as detailed in the Drawings. All construction details and requirements not specified in the Drawings associated with the Bypass Manhole shall be per MASS Standard Details and Standard Specifications.

Through the Engineer, the Contractor shall schedule in-field operational testing of the completed bypass gate system with the MOA Street Maintenance personnel.

The Contractor shall provide operational testing of the bypass gate system to demonstrate compliance with all criteria listed in these special provisions. The tests shall be conducted in the field following completion of the bypass structures/diversion systems, and shall demonstrate the unimpeded access to the manhole, operation of the bypass gate, and to ensure the gate remains in the non-bypass position when unattended.

Article 5.4 Measurement

Insert the following paragraphs immediately following the first paragraph:

No separate measurement for payment will be made for multiple frames and/or covers on a single manhole.

Bypass Manhole shall be measured as a complete unit in place with a fully functioning bypass gate and shall include all appurtenances as shown on the Drawings.

Foundation material for storm drain structures shall not be measured for payment and shall be considered incidental to the contract.

Article 5.5 Basis of Payment

Add the following Pay Item:

ITEM

Construct (Type) Bypass Manhole

SECTION 55.09 CONSTRUCT CATCH BASIN

Article 9.4 Measurement

Add the following to the end of the first paragraph:

Foundation material for catch basins shall not be measured for payment and shall be considered incidental to the contract.

SECTION 55.22 OIL AND GRIT SEPARATOR

Article 22.2 Description

Delete the second paragraph including the model and contact information and replace with the following:

Contractor shall furnish and the following oil and grit separator as shown in the Drawings: Stormceptor model STC450i manufactured by:

CONTECH Engineered Solutions LLC

9025 Centre Point Drive, Suite 400

West Chester, OH 45069

Phone: 800-3381122

Fax: 513-645-7993

Article 22.3 Materials

Replace the last sentence of the first paragraph with the following:

If foundation material is required, it will not be measured for payment and shall be considered incidental to the contract.

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Delete the third paragraph in its entirety and replace with the following paragraph:

Contractor shall provide access to the Stormceptor Model STC 450i through a storm drain manhole frame and cover per MASS Standard Detail 55-4.

Article 22.4 Construction

Add the following paragraph:

1. Access

At each round manhole access, Contractor shall provide ladder rungs on the side of the stormwater treatment structure in accordance with MASS Standard Detail 50-6. Manhole steps shall be installed 12-inches on-center.

Article 22.5 Measurement

Replace the last sentence of the paragraph with the following:

Foundation material, if required, is incidental to this Work item.

Add the following New Sections:

SECTION 55.27 STORM DRAIN BYPASS SYSTEM

Article 27.1 General

The Work under this Section consists of providing all planning, coordination, materials and operations pertaining to rerouting storm drainage flows around those portions of the storm drainage facilities to be replaced/reconstructed or as required to perform other necessary items of Work. The existing flows include those from groundwater base flow and from upstream collection system components that contribute to the subject storm drainage mains or manhole facilities.

Article 27.2 Construction

The storm drainage flows shall be bypassed around sections of pipe or manholes designated for replacement/reconstructed or as required to perform other necessary items of Work on an as-required basis. The Contractor shall ensure that pumps and bypass lines are of appropriate capacity and size to accommodate the anticipated storm drainage flows during the duration of all operations requiring such bypass.

The estimated peak flow for the 10-year, 24-hour storm event for the storm drain system impacted by the Work are as follows: 4.8 cfs.

Prior to construction, the Contractor shall submit to the Engineer a Storm Drain Bypass Plan detailing the scheduled deployment of pumps, hoses, pipes and other equipment necessary to maintain storm drainage flows during construction. Acceptance of Contractor's plan by the Engineer shall not relieve the Contractor of responsibility for the exercise of reasonable precaution, sound engineering judgment, prudent construction practices, overloading or misuse of existing or new structures, the adequacy and safety of such Works, and potential damage or undermining of existing or completed Work. Acceptance of the Storm Drain Bypass Plan by the Engineer does not relieve the Contractor of the responsibility for providing additional Storm Drain Bypass infrastructure if implementation of the accepted Storm Drain Bypass Plan does not result in a dry and stable construction environment throughout the project. Contractor's Storm Drain Bypass Plan shall be in accordance with MOA and State of Alaska regulations.

The pumping system shall be such that the hydraulic gradient both upstream and downstream of the piping being bypassed will not reach elevations that will cause damage to the properties being served. This will require close attention to the elevation of the upstream head needed to actuate the pumping cycle and the rate of discharge flow from the pumps. The Contractor shall be liable for all damages which result from storm drainage flows not properly maintained during the progress of the Work, including all damages to private property which occur as a direct or indirect result of inadequate control of the storm drainage flow while the storm drainage bypass operation is ongoing. The Contractor is reminded that after-hours pumping may require a permit to exceed the allowable noise levels. Should such permit not be available for certain locations, the lack of availability shall not be cause for claim for additional compensation but may be eligible for a time extension.

This Work may include the installation of temporary drainage facilities including pipes or manholes. The Contractor shall remove all temporary drainage facilities prior to completion of this project.

The bypass plan needs to consider ways to quickly accommodate a storm event by using the existing storm drain system. This may affect the pipe installation methods used. The bypass plan should minimize damage to pipes, structures and excavations and to reduce erosion and sedimentation.

Article 27.3 Measurement

The method of measurement for furnishing and installing a storm drainage bypass system shall be lump sum for all Work described in this Section. There will be no separate payment for additional systems to accomplish bypass of flows. There will be no separate measurement or payment for the installation and removal of temporary drainage facilities used for bypass flows since they will be considered incidental to this Work item.

Article 27.4 Basis of Payment

Payment for this Work shall be in accordance with Division 10, Section 10.07 - Measurement and Payment, and shall include full payment for all Work described in this Section.

Payment shall be made under the following unit:

ITEM	UNIT
Storm Drain Bypass System	Lump Sum

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G. DIVISION 60 STANDARD CONSTRUCTION SPECIFICATIONS FOR WATER SYSTEMS

SECTION 60.03 FURNISH AND INSTALL VALVES

Article 3.4 Measurement

Add the following paragraph after the fourth paragraph:

The Remove and Replace Valve Box Top Section pay item shall be measured as complete units in place. The Remove and Replace Valve Box Top Section pay item includes removal and replacement of the valve box top section, dust pan and lid with new components. The Remove and Replace Valve Box Top Section pay item also includes furnishing and installing polyethylene encasement around the valve box top section as shown on MASS Standard Detail 60-8. The Remove and Replace Valve Box Top Section pay item shall also include adjustments of the valve box top section to the Engineer approved final elevation. Multiple er of ar er of ar petermune adjustments of the valve box top section if required by Engineer shall not be measured separately regardless of the number of adjustments.

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H. DIVISION 70 STANDARD CONSTRUCTION SPECIFICATIONS MISCELLANEOUS

SECTION 70.01 GENERAL

Add the following Article:

Article 1.3 Utility Facilities

Prior to commencing any Work covered under this Division or impacting utility facilities the Contractor shall contact the Utility and obtain any permits, approvals, or other requirements as required by the Utility to complete any Work on or in the vicinity of their facilities.

SECTION 70.07 REMOVE PIPE

Article 7.1 General

Delete this Article in its entirety and replace it with the following:

The Work under this Section consists of performing all operations pertaining to the removal and disposal or salvage of existing pipes including culverts (of whatever size of pipe or culvert encountered), when encountered in the excavation and/or as directed by the Engineer or as shown on the Drawings. Work also includes removal and disposal of existing heat trace and/or heat trace conduit within the pipes or culverts, when encountered in the excavation and/or as directed by the Drawings.

Article 7.3 Measurement

Delete this Article in its entirety and replace it with the following paragraphs:

Removal of pipes including culverts is measured per linear foot without regard to pipe or culvert size. Removal of heat trace and/or heat trace conduit shall not be measured as it will be incidental to the Remove Pipe pay item.

There will be no separate measurement or payment for the disposal of unusable excavation or installation of Type II Classified Fill and Backfill necessary for the removal of pipe as it will be considered incidental to this Work item.

SECTION 70.08 RESET FENCE

Article 8.1 General

Add the following sentence:

Work under this Section shall also include the removal of existing fence materials, posts, foundations, slats, and materials mounted on fences as indicated on the Drawings, and the proper disposal of material not reset.

Article 8.3 Construction

Add the following paragraph:

Any excavation required in the removal of the fence posts or the foundation shall be considered incidental to this bid item. Contractor shall backfill the excavation with suitable, non-frost-susceptible material and compact it to 80% of maximum density or as directed by the Engineer. Method of foundation abandonment, if necessary and approved, shall be approved by the Engineer, prior to performing Work.

Article 8.4 Measurement

Add the following paragraph:

Removal and proper disposal of existing fence materials, posts, foundations, slats, and materials mounted on fence shall be measured by length in linear foot without regard to fence type. Signs mounted directly to fence shall be reinstalled on reset fence in the same location as originally mounted. Removal and remounting signs on fence shall be considered incidental to the Remove and Reset Fence pay item.

Remove and Reset Gate shall be for all work remove existing gate across AWWU driveway, store and protect fence during driveway construction, and reinstall gate in original location including any new gate materials, foundations, and all hardware necessary for to complete installation. Signs mounted directly to the gate or on gate posts shall be reinstalled on reset gate in the same location as originally mounted. Removal and remounting of sings on gate and gate posts shall be considered incidental to the Remove and Reset Gate pay item.

Article 8.5 Basis of Payment

Add the following Pay Item:

ITEM

Remove Fence

Remove and Reset Gate

SECTION 70.10 TRAFFIC MARKINGS

Article 10.3 Construction

F. Application

Methyl Methacrylate

Delete the first sentence in paragraph b and replace it with the following.

Contractor shall apply methyl methacrylate pavement markings at a minimum thickness of 250 mils.

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SECTION 70.11 STANDARD SIGNS

Article 11.1 General

Delete the third sentence and replace it with the following:

Work under this Section shall also include the removal and relocation, as well as the removal and proper disposal of existing signs, <u>sign posts</u>, markers and foundations, as indicated on the Drawings.

Article 11.2 Materials

Add the following paragraph:

Contractor shall provide shop drawings of each sign to be installed for Engineer to review prior to fabrication. Shop drawings shall show all dimensions and fonts to be used. Signs fabricated or installed prior to attaining approval of sign shop drawings from the Engineer shall be removed and replaced with approved signs at no cost to Owner.

Article 11.3 Construction

Add the following paragraph:

Where existing signs designed to be removed and relocated are attached to the tops of existing fence posts and/or face of existing fences, the relocated sign shall be installed on a new fence post or face of fence at the location designated in the drawings or as directed by the Engineer in the field.

Article 11.4 Measurement

Add the following paragraph:

New fence post attachments, bases, and all hardware necessary to install relocated signs from the tops of existing fence posts and/or face of existing fences shall be considered incidental to the Remove and Relocate Sign pay item.

SECTION 70.12 TRAFFIC MAINTENANCE

Article 12.1 General

Add the following paragraphs:

Contractor shall provide MOA Signal Maintenance personnel with all required Traffic Control whenever they are called to the project to locate signal components located within the vehicular traveled way.

Utilities will be relocated/protected in place by others concurrently with construction of this project. Contractor shall incorporate traffic control required for utility work in the Traffic Control Plan. The Contractor will be responsible for implementing and maintaining traffic control during relocation/protection of utilities in the project area.

Article 12.5 Materials

Delete items 8 and 9 and replace with the following items:

- 8. <u>Portable Concrete Barriers.</u> Provide portable concrete barriers that conform to ADOT&PF Standard Drawing G-46.11 and are equipped with warning lights.
- 9. <u>Work Zone Pavement Markings.</u> Work zone pavement markings shall be either paint with glass beads or preformed marking tape.
- 10. <u>Street Sweeping.</u> Street sweeper shall be capable of collecting and storing materials for later disposal rather than ejecting them to the shoulder of the road.
- 11. <u>Watering.</u> Watering trucks shall be capable of providing both a high-pressure water stream to flush the pavement and a light-water spray to control dust.
- 12. <u>Plastic Safety Fence.</u> Use 4-foot high construction orange fence manufactured by one of the following companies or an approved equal:
 - e. "Safety Fence" by Services and Materials Company, Inc., 2200 South "J" Street, Elwood, Indiana, 46036. Phone (800) 428-8185.
 - f. "Flexible Safety Fencing" by Carsonite, 1301 Hot Springs Road, Carson City, Nevada, 89706. Phone (800) 648-7974.
 - g. "Warning Barrier Fence" by Plastic Safety Systems, Inc. P.O. Box 20140, Cleveland, Ohio, 44120. Phone (800) 662-6338.

Article 12.6 Public Notice

Delete the first paragraph, inclusive of the list of local officials and transportation organizations, and replace with the following:

The Work Site Traffic Supervisor shall give notices of changes, delays, or lane/road closures to the following local officials and transportation organizations including, but not limited to:

1.	Alaska Court System	264-8232
2.	Alaska State Troopers Alaska Travel Industry Association	428-7200
3.	Alaska Travel Industry Association	929-2842
4.	Alaska Trucking Association	276-1149
5.	Anchorage Chamber of Commerce	272-2401
6.	Anchorage Fire Department	267-4950
7.	Anchorage Police Department	786-8500
8.	Anchorage Public Transportation	343-8253, 343-8386

9. ASD Pupil Transportation 742-1207

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- 11. Local Emergency Medical Services...... 267-4950
- 12. Local Schools and Universities Varies
- 13. Local Solid Waste Utilities...... 563-3717
- 14. MOA Parks and Recreation 343-4297

SECTION 70.18 CHAIN LINK FENCE

Article 18.2 Materials

Add the following paragraph:

L. Fence Slats

01/1/01/2019 Fence slats shall be flat, tubular plastic with three center supports for extra strength. Slats shall be 2-3/8-inches wide and 6-feet long. Color of slats shall be Redwood to match existing fence slats surrounding AWWU property.

Article 18.4 Construction

Add the following paragraph:

H. Fence Slats

Fence slats shall be installed in all Chain Link Fence.

Article 18.5 Measurement

Add the following to the end of the first paragraph:

Furnishing and installing fence slats shall be considered incidental to the Chain Link Fence pay item and shall not be measured separately for payment.

Add the following New Sections:

SECTION 70.22 REMOVAL/DISPOSAL AND/OR SALVAGE OF OBSTRUCTIONS

Article 22.1 General

The Work under this Section consists of performing all work associated with removal/disposal and/or salvage of obstructions encountered in the ROW and/or on private property within the work zone. Obstructions may include but are not limited to the following features: jersey barriers, retaining walls, timbers, landscaping rock, planters, landscape edging, landscaping pavers, lawn ornaments, refuse, debris, abandoned vehicles, shopping carts, etc.

Article 22.2 Construction

Contractor shall remove existing obstructions as shown in the Drawings or as directed by the Engineer in the field. In each case, the Contractor and the Engineer shall coordinate with the property owner if they are the owners of the obstructions.

If property owner wishes to retain items that are currently in the ROW and not allowed to be re-installed in the ROW, Contractor shall place items on owner's property. If owner does not want items placed on property or installed back in ROW, Contractor shall dispose of removed items at a Contractor-supplied location. Materials to be salvaged shall be carefully removed, protected and placed on property.

It shall be the Contractor's sole responsibility to notify the Engineer of existing damage to items to be salvaged prior to removal. Unless otherwise directed by the Engineer in writing prior to removal, if any salvaged items item are damaged, the Contractor shall replace those items in kind including matching type, color and manufacturer.

Article 22.3 Measurement

All Work described in this section as necessary to complete this Work item shall be measured by lump sum and shall consist of all labor, materials, coordination, equipment and personnel required for removal/disposal and/or salvage of obstructions encountered in the ROW and/or on private property within the work zone. If any salvaged items are damaged, the Contractor shall replace those items in kind including matching type, color and manufacturer and no separate payment shall be made.

Article 22.4 Basis of Payment

Payment for this work shall be in accordance with Division 10, Section 10.07 – Measurement and Payment, and shall include full payment for all Work described in this Section.

Payment shall be made under the following unit:

ITEM

UNIT

Removal/Disposal and/or Salvage of Obstructions Lump Sum

SECTION 70.23 BANNERS

Article 23.1 Description

This work shall consist of furnishing and installing Banners comprised of aluminum sandwich board with applied graphics.

Article 23.2 Materials

Banners: 1/8" aluminum sandwich board/ double sided aluminum composite with a polyethylene core as manufactured by DiBond or approved equal. Color shall be black/black.

Graphic Film: Scotchcal IJ35-10 as manufactured by 3M or approved equal.

Overlaminant: Scotchcal 8510 Matte Overlaminate 8510 as manufactured by 3M or approved equal.

Article 23.3 Construction

The banner designs as shown on the plans will be provided in AutoCAD format drawings to the contractor by the engineer. Graphics will be provided in an Adobe Illustrator CS5.5 version file. All materials and finished signs are subject to inspection and acceptance in place. All surfaces exposed to weathering shall be free of any defects in the coating that may detract from the general appearance or color match. The finished banners shall be clean and free from all chatter marks, burrs, sharp edges, and delaminated matte lamination. No repairs shall be made to the face sheet. Graphic film and overlaminate shall be affixed to aluminum sandwich material per the manufacturer's specifications. All banners not conforming to these specifications shall be rejected.

Article 23.4 Measurement

The Banners shall be measured per each complete and installed.

Provide the designated quantity of surplus banners and deliver them to MOA Pole Yard near East 3rd Avenue and Orca Street during regular business hours. Contact TBD (343-8242) 48 hours before delivery.

Article 23.5 Basis of Payment

Payment for this work shall be in accordance with division 10 – Standard General Provisions, Section 10.7 – Measurement and Payment of these Specifications, and shall include full payment for all work described in this Section.

Payment to be made under:

ITEM	20.	UNIT
Banner		Each
Furnish Surplus Banner (Desi	ignation)	Each

SECTION 70.24 TEMPORARY FENCING

Article 24.1 General

The Work covered under this Section shall consist of all operations pertaining to furnishing, installing and removing temporary fencing at properties where fencing has been removed as indicated on the Drawings.

Article 24.2 Materials

Temporary fencing shall be six (6) feet in height and consist of new or previously used chain-link fencing materials in good condition. Posts shall be galvanized steel pipe of diameter to provide rigidity and be suitable for anchoring with base plates or inserting in precast concrete blocks. Fabric shall be woven galvanized steel wire mesh provided in continuous lengths and wire tied to prefabricated pipe-framed fence panels. Gates shall be fabricated of the same material used for fencing and be capable of manual operation by one person. Gates shall be lockable.

Where removed fencing includes barbed wire and arms at the top of the fence, temporary fencing shall include barbed wire supported on arms at a 45-degree angle similar in appearance to the removed fence.

Article 24.3 Construction

Fence and gates shall be installed at locations where existing fencing has been removed. At least one gate shall be installed for each property for which temporary fencing is provided. Fencing shall extend the full width of the property and prevent ingress and egress of personnel and animals through, under or around the fence. Temporary fence shall be installed immediately outside the construction area within 12-hours of removal of existing fences. Temporary fencing shall remain in place until permanent fence is installed.

Contractor may temporarily install the removed barbed wire and arms on the temporary fence until the permanent fence is installed.

Article 24.4 Measurement

All work described in this Section pertaining to the furnishing, installing, maintaining and removing Temporary Fencing shall be measured for payment per linear foot of temporary fence installed. There shall be no additional payment made for relocating temporary fencing on the same property during construction as may be necessary to accommodate construction activities or to facilitate property use by the property owner. Barbed wire and support arms, where required, shall not be measured for payment and shall be considered incidental to the Temporary Fencing pay item.

Article 24.5 Basis of Payment

Payment of this Work shall be in accordance with MASS, Division 10 Standard General Provisions, Section 10.07 Measurement and Payment as amended in these specifications and shall include full payment for all Work as described in this Section.

Payment shall be made under the following unit:

ITEM

UNIT

Temporary Fencing

Linear Foot

G. DIVISION 75 STANDARD CONSTRUCTION SPECIFICATIONS FOR LANDSCAPING IMPROVEMENTS

SECTION 75.02 LANDSCAPING

Article 2.1 General

A. Scope of Work

Add the following paragraph:

The Work shall also include an extended maintenance period and all equipment, labor, materials and transportation necessary to Prune Existing Trees, and to maintain the Landscape and Moose Protection Fence.

- 1. Installation of Tree Protection Zone Fences shall be per Section 75.12 Tree Protection Zone Fence.
- 2. Installation of Moose Protection Fence shall be per Section 75.14 Moose Protection Fence.

Article 2.3 Construction

Delete and replace the existing Paragraph with the following:

M. Pruning and Repair

For new plantings, the only pruning allowed at planting shall be removal of dead, damaged, or broken branches and roots. Pruning shall conform to the American National Standard for Tree Care Operation, ANSI A300. No pruning paint or other wound dressing shall be used.

Article 2.4 Maintenance

A. General

Add the following:

- 1. Extended Maintenance: The plant establishment period shall be extended one year. The Contractor shall furnish all labor, materials, supplies and equipment required to maintain the Landscape and the Moose Protection Fence one year beyond the standard one-year plant establishment period from the date of acceptance of the initial planting operations. Contractor shall conduct periodic visual inspections and repair any damage due to moose, other wildlife or vandalism immediately. The Engineer may notify the Contractor about damages in which case the repairs shall be made within 24 hours. The Contractor shall repair and replace all materials damaged or destroyed within the scope of the Work, regardless of cause.
- 2. The Contractor shall also furnish all labor, materials, supplies and equipment required remove the Moose Protection Fence two years from the date of acceptance of the initial planting operations.

Article 2.5 Landscaping Acceptance

Delete the second paragraph and replace with the following:

A Landscaping Acceptance Inspection of the project will occur after completion of the Plant Establishment Period. Engineer shall verify that Contractor performed maintenance functions as identified in Article 2.4 – Maintenance of this Section. Additional conditions governing Landscaping Acceptance of the planted and seeded areas are that, in the opinion of the Engineer, all plants are in a live, uniform, and sound and healthy and flourishing condition; free of disease, insect infestation and physical damage, and free of weeds, rubbish and construction debris. The Engineer shall verify that all Moose Protection Fencing has been removed as identified in Article 2.4 Maintenance of this Section. If the Engineer does not accept the plantings and removal of Moose Protection Fencing, the Contractor shall correct all deficiencies. All costs associated with correcting the deficiencies and extending the Plant Establishment Period shall be paid by the Contractor without additional cost to the Owner.

Should required corrections not be made within thirty (30) days after the initial Landscaping Acceptance Inspection, the Contractor shall be assessed liquidated damages per Division 10, Section 10.05, Article 5.27 – Liquidated Damages, until all Work is complete and accepted by the Engineer.

NOTFOR

Article 2.7 Basis of Payment

Add the following pay item:

ITEM

Extended Maintenance

UNIT LUMP SUM

Add the following New Sections:

SECTION 75.12 TREE PROTECTION ZONE FENCE

Article 12.1 General

The Work under this Section includes but is not limited to all equipment, labor, and transportation necessary to provide and remove Tree Protection Zone Fences as specified herein. Tree Protection Zone Fences are required where all work abuts mature tree plantings that are to remain in place. Tree Protection Zone Fences are to be removed when construction is complete.

Tree Protection Zone (TPZ): Tree Protection Zones shall be per Section 75.02.

The Contractor is responsible for the verification of all existing utilities or requesting locates of underground utility lines.

Article 12.2 Submittals

A. Certification: provide a certification from a certified arborist that trees indicated to remain have been protected during construction according to

recognized standards and that trees were promptly and properly treated and repaired when damaged.

B. Maintenance Recommendations: From certified arborist, for care and protection of trees affected by construction during and after completing the Work.

Article 12.3 Quality Assurance

- A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to project site during execution of tree protection and trimming.
- B. Arborist Qualifications: An arborist certified by ISA or licensed in the jurisdiction where Project is located.
- C. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."
- D. Pre-installation Conference: Before tree protection operations begin, meet with the Engineer, Arborist to review tree protection procedures and responsibilities and determine tree protection fencing limits on site.
- E. Prior to any excavation, tree protection limits will be staked by the Contractor and approved by the Engineer.
- F. Provide written acceptance from a certified arborist that trees indicated to remain and protected by Tree Protection Zones have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.

Article 12.4 Materials

- A. Topsoil: Topsoil shall be per Section 75.03
- B. Temporary Construction Fencing: 4' High, high visible orange safety fence.
- C. Steel T-Posts: with pointed end and reflective safety caps, green color.

Article 12.5 Construction

- A. Construction Fencing: Install fencing around Tree Protection Zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations. Root pruning shall be per Section 75.13 ROOT PRUNING.
- C. Do not store construction materials, debris, or excavated material inside Tree Protection Zones. Do not permit vehicles or foot traffic within Tree Protection Zones; prevent soil compaction over root systems.

- D. Ensure that branches of trees within the Tree Protection Zone are not broken by equipment.
- E. Maintain Tree Protection Zones free of trash.
- F. Do not allow fires within Tree Protection Zones.

Article 12.6 Tree Repair

Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to Contractor Arborist's written instructions.

Article 12.7 Measurement

Measurement for Temporary Tree Protection Fence shall be by the linear foot.

Article 12.8 Basis of Payment

Payment for the Work shall be in accordance with Division 10, Section 10.07 – Measurement and Payment, and shall include full payment for all Work described in this Section.

Unit cost payment shall be made on the following basis:

ITEM

Temporary Tree Protection Fence

UNIT

Linear Foot

SECTION 75.13 ROOT PRUNING

Article 13.1 General

The Work under this Section includes but is not limited to all equipment, labor, and transportation necessary to provide root pruning as shown on the Drawings and specified herein. Root Pruning is required where all work abuts mature tree plantings that are to remain in place.

The Contractor is responsible for the verification of all existing utilities or requesting locates of underground utility lines.

Article 13.2 Materials

Burlap: A strong woven fabric made of jute, hemp, or flax fibers.

Article 13.3 Quality Assurance

- A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to project site during execution of tree protection and trimming.
- B. Arborist Qualifications: An arborist certified by ISA or licensed in the jurisdiction where Project is located.

Article 13.4 Construction

A. Workmanship and Procedure

Root Pruning shall be performed when below ground construction occurs within 16 feet of a mature tree. Mature trees are trees that are 4" diameter at breast height (DBH) or greater in size. Root Pruning shall be done to a depth of 18 inches. The distance to prune away from the base of a tree shall be determined by providing 1 foot of horizontal distance from the trunk of the tree for every 1 inch of DBH of that tree.

- 1. All roots 1" in diameter or greater shall be cut clean with a root pruner, a sharp saw, and/ or hand pruners.
- 2. Roots must not be pruned or removed from more than one side of a tree.
- 3. All pruned roots are to be covered by wet burlap and kept moist for the duration of time that the root is exposed.
- 4. Topsoil shall be used to backfill the excavated area around the root.
- B. Maintenance

Keep the burlap that is covering pruned roots moist for the duration of time that the root is exposed.

Article 13.5 Measurement

Measurement for Root Pruning shall be by the linear foot.

Article 13.6 Basis of Payment

Payment for the Work shall be in accordance with Division 10, Section 10.07 – Measurement and Payment, and shall include full payment for all Work described in this Section.

Unit cost payment shall be made on the following basis:

ITEM

UNIT

Root Pruning

Linear Foot

SECTION 75.14 MOOSE PROTECTION FENCE

Article 14.1 General

The work under this section includes but is not limited to all labor, materials, transportation, and maintenance necessary to furnish and install temporary fencing for moose protection as shown on the drawings and specified herein. Moose Protection Fence is required around all new individual deciduous trees and/or deciduous tree groupings.

The Contractor is responsible for the verification of all existing utilities or requesting locates of underground utility lines.

Article 14.2 Materials

Posts: Steel T- posts with pointing, green color, 9' height.

Fabric: Fabric shall be 1-3/4 inch opening black nylon netting with 5/16" black polyester rope border. Use metal ties to secure to posts.

Article 14.3 Construction

A. Workmanship and Procedure

Moose protection fencings shall be erected immediately following the tree installation. The moose protection fencing shall be place at the outside edges of individual deciduous trees and/or all deciduous tree groupings. All deciduous trees shall be enclosed within the fencing without damaging branches or allowing branches to protrude.

B. Detail Drawings:

All assemblies specified herein shall be installed in accordance with the drawings.

C. Maintenance:

Maintenance of the Moose Protection Fence shall be per Section 75.02.

Article 14.4 Measurement

Measurement for Moose Protection Fence shall be by the linear foot.

Article 14.5 Basis of Payment

Payment for the Work shall be in accordance with Division 10, Section 10.07 – Measurement and Payment, and shall include full payment for all Work described in this Section.

Unit cost payment shall be made on the following basis:

ITEM

UNIT

Moose Protection Fence

Linear Foot

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard MOA PM&E Project No. 16-29

J. DIVISION 80 STANDARD CONSTRUCTION SPECIFICATIONS FOR TRAFFIC SIGNALS AND ILLUMINATION

SECTION 80.01 GENERAL

Article 1.1 Scope of Work

Add the following at the end of the first paragraph:

The General requirements of this Section shall apply to all Sections within Division 80.

Article 1.2 Regulations and Codes

Add the following to the first paragraph:

For all Division 80 items furnish listed or labeled components, including individual components as well as complete assemblies, whenever those components are available with the listing or labeling.

SECTION 80.04 FOUNDATIONS

Article 4.1 General

Delete the first paragraph and add the following:

Install cast-in-place Portland Cement Concrete foundations for traffic signal poles, signal pedestal poles, and pedestrian pushbutton posts. Install driven pile foundations for luminaire poles.

Article 4.5 Driven Pile Foundation

Add the following after the second paragraph:

For fixed base pile caps, 1/8" plasma cut from edge to hole is acceptable for plasma cut bolt holes.

Add the following to the end of the Article:

Contractor shall pre-excavate holes with vactor truck when proposed pole location is within 10-feet of an existing buried utility. Excavation depth shall be a minimum of 12-inches below the anticipated depth of the utility before driving pile. Excavation shall be backfilled and compacted after pile driving is complete.

Article 4.6 Measurement

Append the following to the last paragraph:

All survey and staking work required to locate the foundations shall be incidental to the work. All work to pre-excavate for driven pile foundations shall be considered incidental to the work.

Article 4.7 Basis of Payment

Add the following pay item:	
ITEM	UNIT
Cast-In-Place Light Column Foundation	EA

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard MOA PM&E Project No. 16-29

SECTION 80.08 JUNCTION BOXES

Article 8.4 Measurement

Append the following to the last paragraph:

All survey and staking work required to locate the junction boxes shall be incidental to the N/10120 work.

SECTION 80.13 BONDING AND GROUNDING

Article 13.1 General

Add the following after the first paragraph:

In junction boxes, provide enough slack in the grounding conductors to ensure the conduits remain securely bonded to ground should the conduits move for whatever reason.

SECTION 80.23 LUMINAIRES

Delete this Section in its entirety and replace with the following:

Article 23.1 General

Provide the luminaire(s) specified on the Drawings. Furnish luminaires with the light distribution and light source specified, i.e. color enhanced high pressure sodium, metal halide, or induction lamps or light emitting diodes (LEDs). Furnish lamps of the wattages specified and/or the number of LEDs to be furnished. The light sources shall feature a color rendering index of at least 65 as determined by their manufacturer.

Provide LED luminaires that produce light with a color correlated temperature (CCT) specified on the Drawings.

After the luminaire poles have been installed and plumbed, the Contractor shall level each luminaire to ensure it provides the light distribution used to design the system.

When allowed on the Drawings, the Contractor may furnish approved equal luminaires. The Contractor shall submit the following documents for approval:

A. Luminaire specifications, including dimensions, and a photograph,

B. Electronic photometric data in Illuminating Engineering Society (I.E.S.) format, preferably by a link to the manufacturer's web site, including the photometric identification number(s),

- C. The input and output of a lighting analysis program,
- D. The input shall include each lamp or LED bars lumen output, lumen maintenance factors, and each luminaire's photometric identification number, drawing pole number, mounting height, spacing, and offset from the traveled way.

- E. The output shall verify each luminaire provides the average light levels, uniformity ratios, and veiling luminance criteria for the roadways, pedestrian facilities, and intersections listed on the Drawings.
- F. Manufacturer's Warranty information for the substituted fixture. Ten year minimum is required.

Article 23.2 Light Distribution

The luminaires furnished shall provide the light distribution(s) specified on the Drawings in the following terms as defined by the Illuminating Engineering Society (IES). The distribution along a roadway (longitudinal) shall be short, medium, or long; the luminaire cutoff angle cutoff angle shall be full cutoff for all fixtures and the distribution across a roadway (lateral) shall be Type 1, Type 2, Type 3, Type 4, or Type 5.

Prior to installation, Contractor shall check the socket position in the luminaire to verify it corresponds to the setting indicated in the instructions for the light distribution type shown on the Drawings.

Article 23.3 Luminaire Features

Luminaires shall feature:

- 1. Corrosion-resistant enclosures with space for the driver or ballast and a gray or silver paint finish.
- 2. Third party certification for use in wet locations.
- 3. Terminal blocks for attaching the illumination tap conductors.
- 4. Optical components free of substances that affect photometric performance, e.g. paint.
- 5. Housings cast with no provision for a photoelectric control receptacle, except those luminaires specified to be furnished with a photoelectric control.
- 6. Gaskets that are securely held in place and are composed of material capable of withstanding the temperatures generated by an operating luminaire on the hottest day.
- 7. 7-pin twist-lock receptacle compliant with NEMA standard C136.41 to provide ON/OFF and dimming control with shorting cap.

Article 23.4 Measurement

Luminaires will be measured as units complete, leveled, and in place, including all labor, equipment, and materials to provide a complete and functioning unit.

Spare Luminaire will be measured as complete units delivered to the MOA Orca Street Pole Yard (Contact: Paul VanLandingham at 343-8372 for specific delivery instructions).

No measurement for payment will be made until a functional field test has been completed in accordance with Section 80.16, Article 16.2 Field Tests.

Article 23.5 Basis of Payment

Payment of this Work shall be in accordance with Division 10 Standard General Provisions, Section 10.07 Measurement and Payment, of this Specification, and shall include full payment for all Work described in this Section.

UNIT

.ach Each

Payment shall be made under the following units:

<u>ITEM</u>

Luminaire (No. of LED's) (Longitudinal) (Lateral)

Spare Luminaire (No. of LED's) (Longitudinal) (Lateral)

SECTION 80.29 PEDESTRIAN LIGHT COLUMN

Article 29.1 General

The Work under this Section consists of all labor, equipment, and materials necessary to install pedestrian light columns, as indicated on the Drawings and as specified herein.

Install the necessary conduit, Type 1A J-box and conductors to the electrical supply designated on the Drawings.

The foundations for pedestrian light columns shall conform to the requirements of Section 80.04, Foundations.

For the item Pedestrian Light Column provide Phillips Lumec SoleCity LED Light Column as specified in the Drawings or equal.

Article 29.2 Spare Pedestrian light column

Spare Pedestrian Light Column will be measured as complete units delivered to the MOA Orca Street Pole Yard (Contact: Paul VanLandingham at 343-8372 for specific delivery instructions).

Article 29.3 Measurement

The Pedestrian Light Column shall be measured as a single unit, complete, and in place including all hardware and all wiring within the pole. No measurement for payment will be made until a functional field test has been completed in accordance with Section 80.16, Article 16.2 Field Tests.

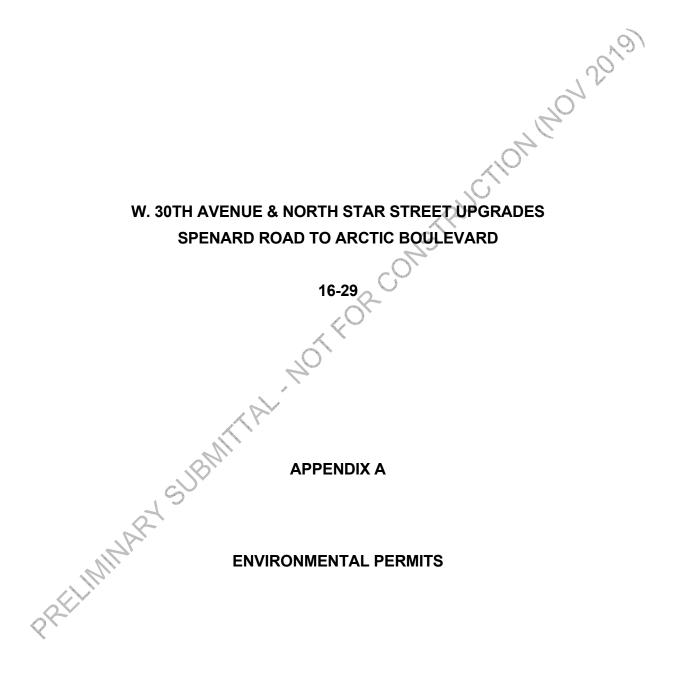
Method of measurement for furnishing spare pedestrian light column shall be per each unit delivered and accepted.

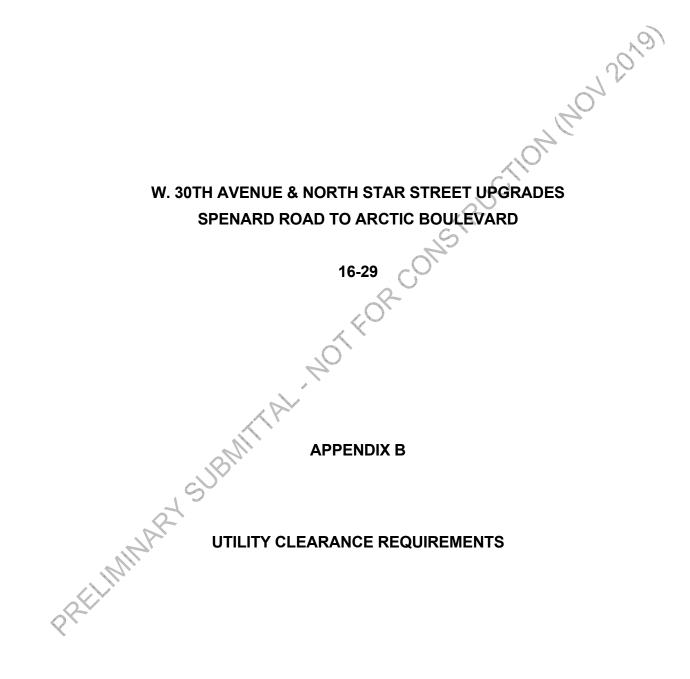
Article 29.4 Basis of Payment

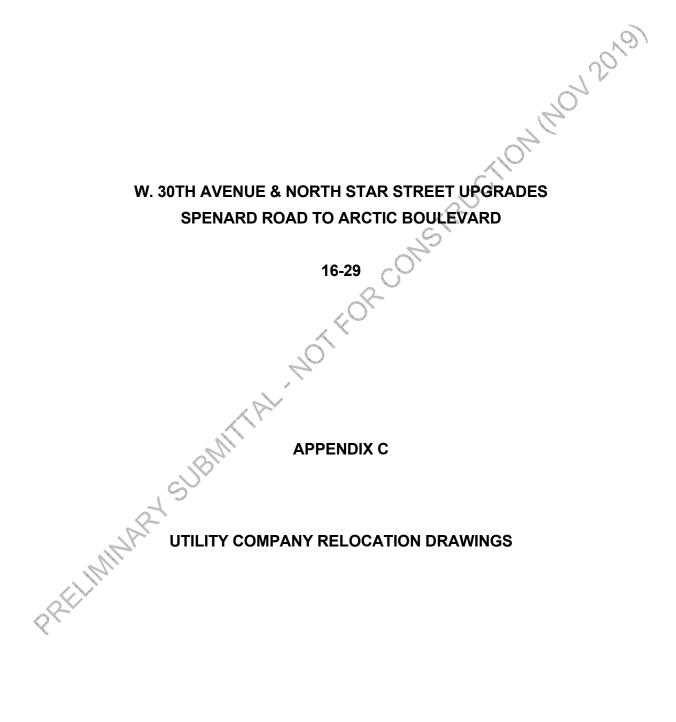
Payment for this Work shall be in accordance with M.A.S.S. Section 10.07 Measurement and Payment, as amended in these specifications, and shall include full payment for all Work as described in this Section.

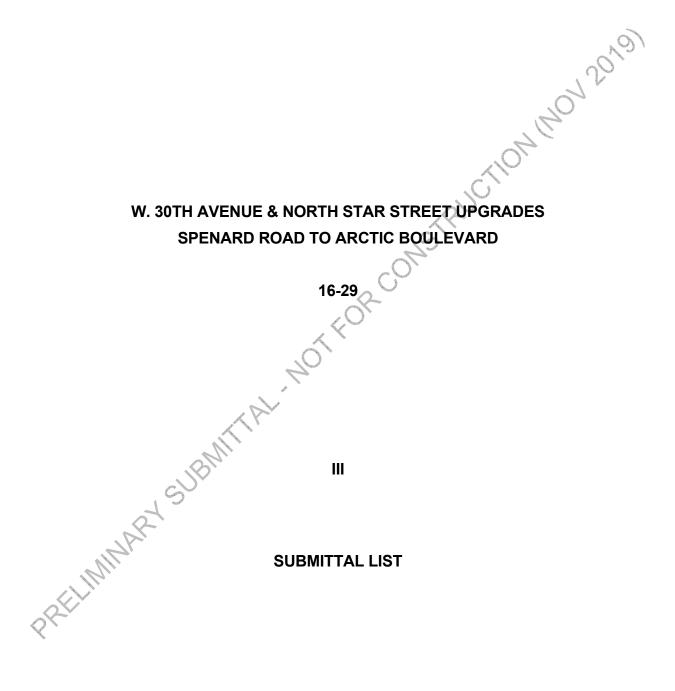
ITEM	UNIT
Pedestrian Light Column	Each
Spare Pedestrian Light Column	Each
END OF SPECIAL	PROVISIONS
***END OF SPECIAL	or construction move and a second

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard MOA PM&E Project No. 16-29









W. 30TH AVENUE & NORTH STAR STREET UPGRADES SPENARD ROAD TO ARCTIC BOULEVARD

16-29

SUBMITTAL LIST

SUBMITTAL LIST		
Job #: 16-2	9	Contractor:
Submittal Number	Rev.	Description
10.04.9		Private Property Disposal Site Permission; Fill Permit
10.04.13		Street Closures; Traffic Control Plan
10.04.15		Temporary Erosion Control and Storm Water Pollution Prevention Plan
10.04.17		Utility Notification
10.04.19		Record Drawings
10.04.22		Contractor's Emergency Contact Data
10.05.3		Construction Progress Schedule
10.05.3		Schedule of Values
10.05.3		Submittal Schedule
10.05.4		Notice of Unusual Working Hours
10.05.6		Product Data
10.05.7	Toly	Proposed Substitutions
10.05.9	h.	Contractor's Authorized Representatives and Employees
10.05.10		Subcontractor's List
10.05.34		Work Plan
10.06.9		Certificate of Insurance
10.06.12		Certified Payroll
20		All Imported Earthwork Materials Required from this Contract

Submittal Number	Rev.	Description
20.02		Storm Water Pollution Prevention Plan
20.12/20.13		Dewatering/Trench Dewatering Plan
20.12		ADEC Dewatering Plan Permit Approval
20.25		Geotextile (all types)
20.26		Insulation Board
20.30		Trench Sheeting/Shoring Submittal
20.31		Stream Armor Substrate
20.31		Riprap Armor
30.01.9		Concrete Temperature Maintenance Procedure Proposal
30.01		All concrete mix designs
30.10		Colored concrete
40.04.2		Certified Analysis of Asphalt for Tack Coat from Refining Laboratory
40.04.3		Tack Coat Test Strip and Notification
40.06.2		Certified Analysis of Asphalt for A.C. Pavement from Refinery Lab.
40.06.3		Asphalt Job Mix Formula for A.C. Pavement Laboratory
40.06.4	to	Contractor's Certificate of Compliance for bituminous paver segregation mechanism installation.
55.02	JK.	Storm Drain Televising Documentation
55.02		Storm Drain Pipe
55.05 & 55.09		Storm Drain Structure Shop Drawings
55.05		Bypass Gate Control Shop Drawings
55.22		Oil and Grit Separator Shop Drawings

Submittal Number	Rev.	Description
55.27		Storm Drain Bypass System Plan
70.11		Sign Shop Drawings
70.12		Traffic Control Plan
70.12.4		Identify I.M.S.A./A.T.S.S.A. Person and Telephone Number
70.12.6		Proof of Advertisements
70.18		Chain Link Materials and Shop Drawing Showing Layout
75.02		Landscape Maintenance Schedule
75.02		Tree Service Firm & Arborist Certification
75.03.2		Topsoil Analysis Test Reports
75.03		Topsoil Mix
75.04		Seed Certification
80.00		All Electrical/Signal Equipment and Materials Submittals

NOTE: The above list of submittals is not all inclusive. In addition to the above, the Contractor is required to comply with all submittal requirements as required or identified in the Drawings, specifications, M.A.S.S., or as directed by the Engineer.

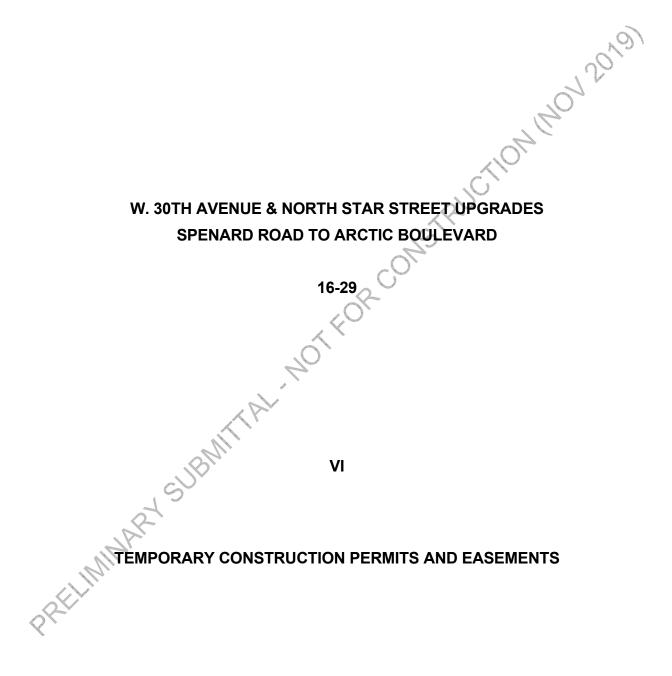
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JGN DETAILS TO BE PROVIDED FOR \$5% DESIGN MONAND

JCTION MOV 2019) JA JARCT. 16-29 ROTTON ROTTON W. 30TH AVENUE & NORTH STAR STREET UPGRADES SPENARD ROAD TO ARCTIC BOULEVARD

SOILS INFORMATION



Some of the easements or permits obtained for the construction of the project contain restrictions or special considerations. The Contractor shall be responsible for complying a. Tr., site at a. , site at a. , site at a. , site at a. with all restrictions or special considerations. The Contractor shall not begin work until all easements or permits necessary for construction of the project have been acquired. The



CONTRACT COMPLIANCE SPECIFICATIONS

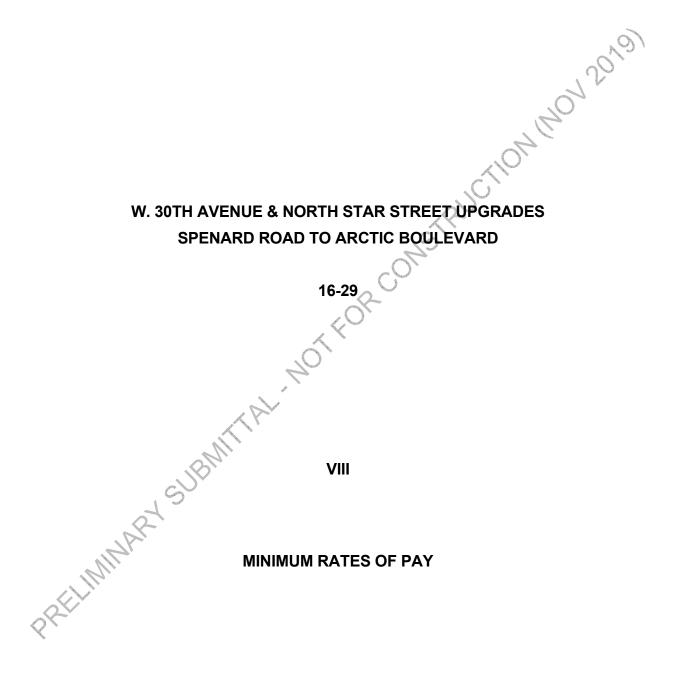
EQUAL EMPLOYMENT OPPORTUNITY

SPECIAL PROVISIONS

20

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, marital status, or physical or mental disability. The contract will comply with all laws concerning the prohibition of discrimination including, but not limited to, Title 5 and Title 7 of the Anchorage Municipal Code.

Every municipal contract shall state, in all solicitations or advertisements for employees to work under the contract, that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, marital status, or physical or mental disability.



Laborers' & Mechanics' Minimum Rates of Pay

Title 36. Public Contracts AS 36.05 & AS 36.10 Wage & Hour Administration Pamphlet No. 600 (Pamphlet 600) is hereby incorporated in its entirety. Pamphlet 600 is available for free download at http://labor.state.ak.us/lss/pamp600.htm.

The Municipality of Anchorage will include a paper copy of the wage

petimme



CONTRACT

Invitation to Bid No. 2019C

Contract No. C-2019

NAME AND ADDRESS O	F CONTRACTOR:	Check app	propriate box:
		🗵 Incorpo	orated in the State of
MUNICIPALITY OF ANCH	ORAGE, acting through		(hereinafter the Owner).
Contract for			
BID SCHEDULES	<u>ITEMS</u>	<u>PLAN SHEET</u> <u>FILE NUMBERS</u>	<u>AMOUNT</u>
			\$
		Total Am	ount : \$

THIS CONTRACT, entered into by the MUNICIPALITY OF ANCHORAGE, ALASKA, acting through the Owner named above, and the individual, partnership, or corporation named above, hereinafter called the Contractor, WITNESSETH that the parties hereto do mutually agree as follows:

Statement of Work: The Contractor shall furnish all labor, equipment and materials and perform the Work above described, for the amount stated, in strict accordance with the Contract Documents.

CONTRACT DOCUMENTS

- I. This CONTRACT consisting of 4 pages.
- II. The Bid Proposal Section _____ consisting of _____ pages numbered as _____, as contained in ITB 2019C_____.

III. The Contract Performance and Payment Bond

- IV. The Contractor's Certificate of Insurance Dated
- V. Municipality of Anchorage Standard Specifications dated 2015 (MASS) Incorporated by Reference, as contained in ITB 2019C_____.
- VI. Specifications consisting of the following:

Supplemental Provisions Section _____ consisting of _____ pages, with attachments Exhibit A through F, **as contained in ITB 2019C**_____.

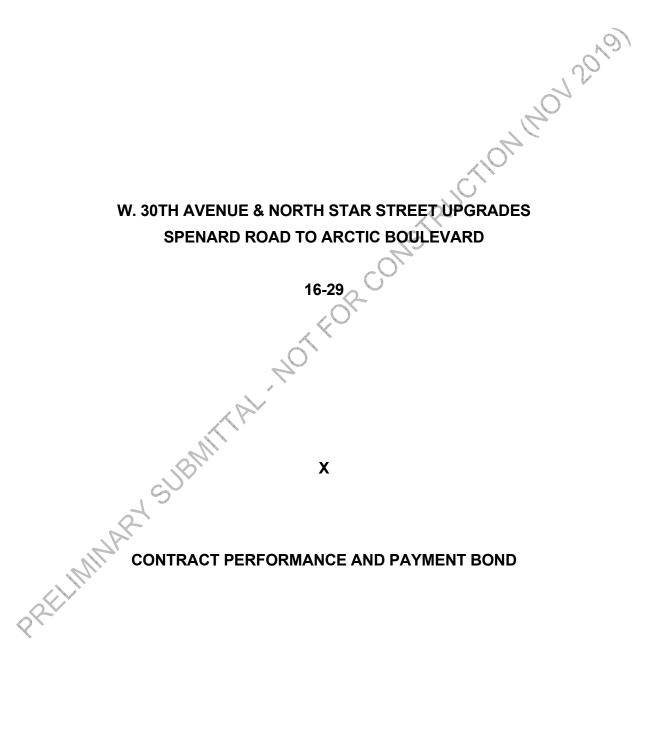
- VII. Equal Opportunity Special Provisions and Forms Section _____ consisting of _____ pages, as contained in ITB 2019C_____.
- VIII.Disadvantaged/Women-Owned Business Enterprise (DBE/WBE) Specification Section _____ consisting of _____ pages, as contained in ITB 2019C_____.
- IX. The Laborers' and Mechanics' Minimum Rates of Pay dated September 1, 2015 Section _____ consisting of _____ pages, as contained in ITB 2019C_____.
- X. Submittal List Section _____ consisting of _____ page, as contained in ITB 2019C_____.
- XI. The Drawings consisting of _____ sheets numbered _____, as contained in ITB 2019C_____.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the Contract Date entered below.

MUNICIPALITY OF ANCHORAGE, ALASKA	VENDOR
ВҮ	ВҮ
Signature	Signature
<u>Purchasing Officer or designee</u> Title	Printed Name Title
Date of Signature and Contract Date:	Date of Signature

CONTRACT AND PERFORMANCE AND PAYMENT BOND SIGNATURE INSTRUCTIONS

- 1. The full name and business of the Contractor shall be inserted on Page 1 of the Contract and on the Performance and Payment Bond, hereinafter the Bond.
- 2. Two copies of the Contract and the Bond shall be manually signed by the Contractor. If the Contractor is a partnership or joint venture, all partners or joint ventures shall sign the Contract and the Bond except that one partner or one joint venturer may sign for the partnership or joint venture when all other partners or joint venturers have executed a Power-of-Attorney authorizing one partner or joint venturer to sign. The Power-of-Attorney shall accompany the executed contract and the Bond.
- 3. If the Contractor is a corporation, the President of the corporation shall execute the Contract and the Bond unless a Power-of-Attorney or corporate resolution shall accompany the executed Contract and Bond.
- 4. The Bond shall be returned to the Purchasing Division undated. The Contract Date shall be inserted on the Contract when the Municipality signs the Contract and the Bond shall be dated the same as the Contract Date.



CONTRACT PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESEN	ITS, That we	
	of	
as Principal, and		
a corporation organized under the laws	of the	
	and authorized to tr	ansact surety business in
the State of Alaska, of		<u>, 10, , , , , , , , , , , , , , , , , , </u>
as Surety, are held and firmly bound u	nto the MUNICIPALITY OF ANC	CHORAGE, as Obligee, in
the full and just sum of		9
(\$) Dollars, lawful money of	the UNITED STATES, for
the payment which, well and truly t	to be made, we bind ourselve	es, our heirs, executors,
administrators, successors and assigns	s, jointly and severally, firmly by t	hese presents.
THE CONDITIONS OF THIS OBLIGAT	ΓΙΟΝ IS SUCH, that whereas the	principal has entered into
a certain contract dated the	date of	20,
with the Obligee for the construction of		

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract, and shall promptly make payments to all persons supplying labor and material in the prosecution of the work provided for in said contract, during the original term of said contract and any extensions or modifications thereof that may be granted by the Municipality, with or without notice to the Surety, then this obligation to be void; otherwise to remain in full force and effect.

This obligation is made for the use of said Obligee and also for use and benefit of all persons who may perform any work or labor or furnish any material in the execution of said Contract and may be sued on thereby in the name of said Obligee.

The said Surety, for the value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same, shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

Contract Performance and Payment Bond

Whenever Principal shall be, and declared by Obligee to be in default under the Contract the Obligee having performed Obligee's obligations thereunder, the Surety may promptly remedy the default or shall promptly:

- 1. Complete the Contract in accordance with its terms and conditions, or
- 2. Obtain a bid or bids for submission to Obligee for completing the Contract in accordance with its terms and conditions and upon determination by Surety of the lowest responsible bidder, or, if the Obligee elects, upon determination by Obligee and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Obligee and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price but not exceeding, including other costs and damages for which the Surety may be liable hereunder the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph, shall mean the total amount payable by Obligee to Principal under the Contract and any amendments thereto, less the amount properly paid by Obligee to Principal.

IN TESTIMONY WHEREOF, the parties hereinto have caused the execution hereof in _____

original counterparts as of the day of ,

20_____.

WITNESS AS TO PRINCIPAL:

Principal Name

Principal Signature

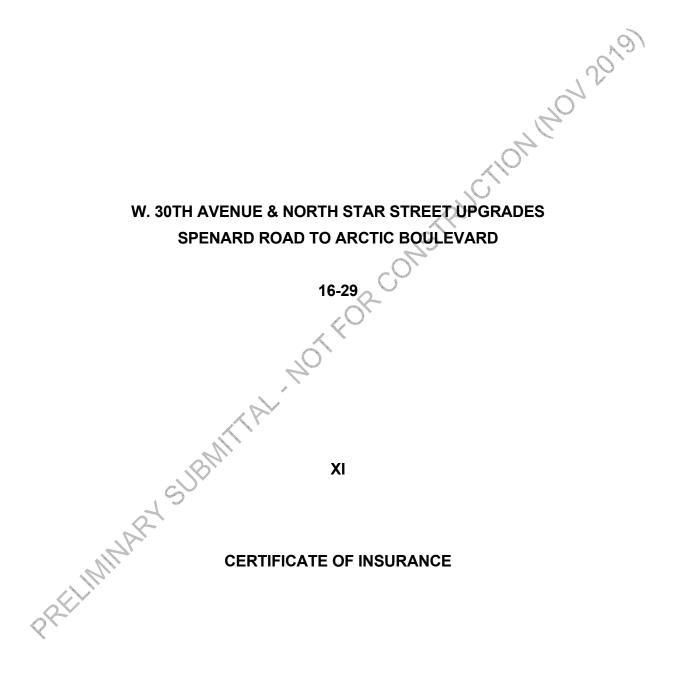
Corporate Surety

Surety Business Address

BY:

(Attorney-In-Fact)

(AFFIX SURETY SEAL)



ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

C CERTITIONTE OF				
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY A BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CON REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOL	MEND, EXTEND O	R ALTER THE CO	VERAGE AFFORDED BY '	THE POLICIES
IMPORTANT: If the certificate holder is an ADDITIONAL INSURE the terms and conditions of the policy, certain policies may requir certificate holder in lieu of such endorsement(s).				
PRODUCER	CONTACT NAME: PHONE	· · · · · · · · · · · · · · · · · · ·	FAX	
	(A/C, No, Ext): E-MAIL ADDRESS:	· · · · · · · · · · · · · · · · · · ·	(A/C, No):	
		INSURER(S) AFFOR	DING COVERAGE	NAIC #
INSURED	INSURER A :			
	INSURER C :			
	INSURER D :	*****		
	INSURER E :			
COVERAGES CERTIFICATE NUMBER:	INSURER F :		REVISION NUMBER:	
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELI INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CON- CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE A EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY	DITION OF ANY CON FFORDED BY THE F Y HAVE BEEN REDUC	IED TO THE INSURE TRACT OR OTHER E OLICIES DESCRIBEE ED BY PAID CLAIMS.	D NAMED ABOVE FOR THE F DOCUMENT WITH RESPECT 1	O WHICH THIS
INSR TYPE OF INSURANCE INSR WVD POLICY NUT	MBER (MM/DI	Y EFF POLICY EXP (YYYYY) (MM/DD/YYYY)	LIMITS	
GENERAL LIABILITY INSN INSN			EACH OCCURRENCE \$ DAMAGE TO RENTED \$ PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPIOP AGG \$ SCOMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ BODICTS - COURRENCE \$ AGGREGATE \$ S \$ PROPERTY DAMAGE \$ AGGREGATE \$ S \$ WC STATU- TORY LIMITS OTH- ER E.L EACH ACCIDENT \$ E.L. DISEASE - FA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$	
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional R ADDITIONAL INSURED: 1. ADDITIONAL INSURANCE: The Municipality of Anchorage is an add against the Municipality except Professional Liability and Worker's Co 2. CANCELLATION: "Should any of the above described policies be ca with the Policy Provisions."	litional insured on all ompensation.	policies, and shall co		
CERTIFICATE HOLDER	CANCELLA			
	THE EXPIR	ATION DATE THE CEWITH THE POLICY	SCRIBED POLICIES BE CANCE REOF, NOTICE WILL BE [/ PROVISIONS.	

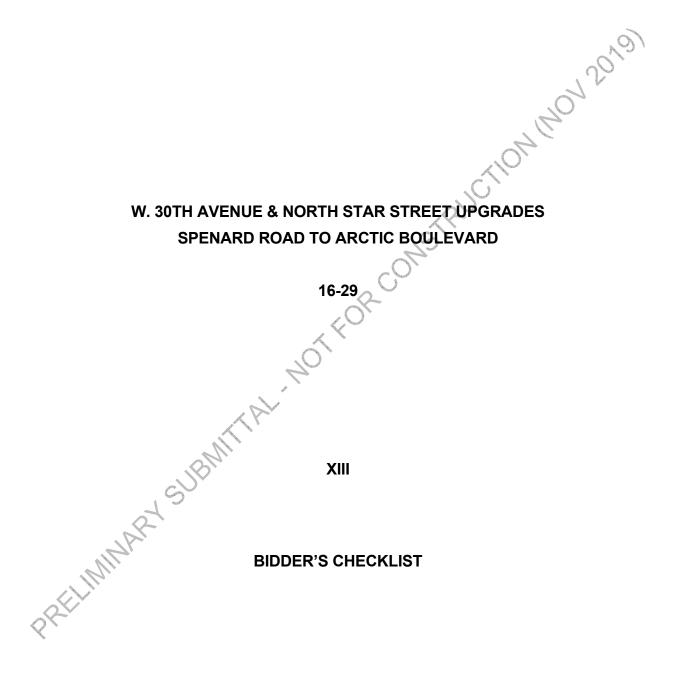
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BID BOND

KNOW ALL MEN BY THESE PRESENTS, That w	/e,	
as Principal, and		a
corporation organized under the laws of the		
authorized to transact surety business in the State	e of Alaska, o	of
as Surety, are h	eld and firm	ly bound unto the MUNICIPALITY OF
ANCHORAGE, as Obligee, in the full and just sum	n of	
(
money of the UNITED STATES, for the payment	t of which s	um, well and truly to be made, we bind
ourselves, our heirs, executors, administrators, s	uccessors, a	and assigns, jointly and severally, firmly
by the presents.		
WHEREAS, the said Principle is herewith submitti	ng its propo	sal for
The condition of this obligation is such that if the a into a formal contract and give a good and sufficie conditions of the contract, then this Obligation to unto to the Obligee the amount stated above.	ent bond to s	ecure the performance of the terms and
Signed, sealed, and delivered		, 20
WITNESS AS TO PRINCIPAL:		
	-	Contractor Name
	-	Contractor Signature
(AFFIX CORPORATE SEAL)	-	Corporate Surety
	-	Surety Business Address
	BY: _	(Attorney-In-Fact)

(AFFIX SURETY SEAL)



BIDDER'S CHECKLIST

INSTRUCTIONS TO BIDDER

I. GENERAL

Bidders are advised that, notwithstanding any instructions or implications elsewhere in this Invitation to Bid, only the documents shown and detailed on this sheet need be submitted with and made part of their bid. Other documents may be required to be submitted after bid time, but prior to award. Bidders are hereby advised that failure to submit the documents shown and detailed on this sheet shall be justification for rendering the bid nonresponsive. Evaluation of bids for responsiveness shall be accomplished in accordance with Anchorage Municipal Code, Title 7.

- II. REQUIRED DOCUMENTS FOR BID:
- <u>NOTE</u>: Only the following listed items as marked with an "X" are required to be completely filled out and submitted with the bid.
- <u>X</u> Bid proposal consisting of pages BP-1 through BP-10. BPs-2 and BP-9 must be manually signed.
- X Erasures or other changes made to the Bid Proposal Sheet must be initialed by the person signing the bid.
- Two identical sets of descriptive literature, brochures, and/or data must accompany the bid where specifically requested or when in support of an "or equal" offer.
- X Bid bond, certified check, cashiers check, money order or cash shall be submitted with the bid in the amount indicated.
 - All Addenda issued shall be acknowledged in the space provided on the Bid Proposal sheet <u>or</u> by manually signing the Addenda sheet and submitting it prior to the bid opening in accordance with Anchorage Municipal Code 7.20.020C.

Disadvantaged and Women-Owned Business Enterprises, Form 10-029

Others



BID PROPOSAL

(CERTIFICATION)

2020

MUNICIPALITY OF ANCHORAGE TO: PURCHASING DEPARTMENT 632 W. 6TH AVENUE. SUITE 520 ANCHORAGE, ALASKA 99501

SUBJECT: Invitation to Bid No. 2020C0

PROJECT TITLE: W. 30TH AVENUE & NORTH STAR STREET UPGRADES - SPENARD ROAD TO ARCTIC BOULEVARD

Pursuant to and in compliance with subject Invitation to Bid, and other bid documents relating thereto, the bidder hereby proposes to furnish all labor and materials and to perform all work for the construction of the above referenced project in strict accordance with the bid documents at the prices established in the Bid Proposal, pages BP-1 of 11 through BP-11 of 11 submitted herewith?

The bidder agrees, if awarded the contract, to commence and complete the work within the time specified in the bid documents.

The bidder acknowledges receipt of the following addenda:

Addenda No	Date of Addenda
Addenda No	Date of Addenda
Addenda No	∼ Date of Addenda
BM	
Enclosed is a Bid Bond in the amount of	<u> </u>
-	(Dollar Amount or Percentage of Bid)

Type of Business Organization

The bidder, by checking the applicable box, represents that it operates as () a corporation incorporated under the laws of the State of ____, () an individual, () an LLC, () a partnership, () a nonprofit organization, or () a joint venture. If a partnership or joint venture, identify all parties on a separate page.

Company Name

(CERTIFICATION) Continued

SUBJECT: Invitation to Bid No. 2020C0

PROJECT TITLE: W. 30TH AVENUE & NORTH STAR STREET UPGRADES- SPENARD ROAD TO ARCTIC BOULEVARD

	00/9)
Date	Alaska Contractor's License Number
Company Name (Printed)	Employer's Tax Identification Number
Authorized Representative Signature	Printed Name & Title
Company Mailing Address	Company Phone Number
City, State, Zip Code	Company Fax Number Company Email Address
Company Physical Address (if different from mailing address)	
City, State, Zip Code	

W. 30th Avenue & North Star Street Upgrades Spenard Road to Arctic Boulevard

MOA Project No. 16-29

Bid Proposal

BASE BI)	
Schedule	Description	Bid Amount
А	Roadway Improvements	
В	Drainage Improvements	
С	Illumination Improvements	
D	Landscaping Improvements	

Total Project: _____

Contractor's Name:

		Roadway Improvements				
ITEM NO.	SPEC. NO.	WORK DESCRIPTION		EST. QUANT	UNIT BID PRICE	TOTAL BID PRICE
A-1	20.02 95.04	Storm Water Pollution Prevention Plan (Type 3)	Per LS	1	TROL	TRIOL
A-2	20.03 95.04	Test Pit for Utility Locate	Per Hour	12		
A-3	20.04 95.04	Clearing and Grubbing	Per LS	1		
A-4	20.07 95.04	Remove Sidewalk or Concrete Apron	Per SY	195		
A-5	20.08	Remove Curb and Gutter	Per LF	1,729		
A-6	20.09 95.04	Remove Pavement	Per SY	7,796		
A-7	20.10 95.04	Unusable Excavation	Per CY	16,000		
A-8	20.21 95.04	Classified Fill and Backfill (Type II)	Per Ton	14,300		
A-9	20.21 95.04	Classified Fill and Backfill (Type II-A)	Per Ton	13,600		
A-10	20.22 95.04	Leveling Course	Per Ton	940		
A-11	20.25	Geotextile (Type A)	Per SY	10,720		
A-12	20.26 95.04	Insulation Board (R-4.5)	Per SF	5,950		
A-13	20.26 95.04	Insulation Board (R-9)	Per SF	73,940		
A-14	30.02	P.C.C. Curb and Gutter (All Types)	Per LF	4,084		
A-15	30.02	Curb Nose	Per EA	2		
A-16	30.02	P.C.C. Curb & Gutter (Type 1, Steel Curb Facing)	Per LF	25		
A-17	30.03 95.04	P.C.C. Sidewalk (4" Thick, Standard Finish)	Per SY	777		
A-18	30.03 95.04	P.C.C. Sidewalk (6" Thick, Standard Finish)	Per SY	608		
A-19	30.04 95.04	P.C.C. Curb Ramp (6" Thick)	Per SY	110		

Bid Proposal

Contractor's Name: _____

Sch	Schedule: A Roadway Improvements					
ITEM NO.	SPEC. NO.	WORK DESCRIPTION		EST. QUANT	UNIT BID PRICE	TOTAL BID PRICE
A-20	30.04 95.04	Detectable Warnings	Per SF	117		
A-21	30.05 95.04	P.C.C. Retaining Wall Class (AA-3)	Per CY	99		
A-22	30.10 95.04	Colored Concrete (4" Thick, Red, Running Bond Tile Pattern)	Per SY	42		
A-23	40.06	A.C. Pavement (Class E)	Per Ton	960		
A-24	50.03	Construct Sanitary Sewer Manhole (Type A)	Per EA	1		
A-25	50.06 95.04	Remove and Replace Manhole Cone Section	Per EA	1		
A-26	50.06 95.04	Remove and Replace Manhole Cover and Frame	Per EA	2		
A-27	50.06 95.04	Remove Existing Sanitary Sewer Cleanout	Per EA	1		
A-28	55.07	Adjust Storm Drain Manhole Cone	Per EA	1		
A-29	55.08	Adjust Storm Drain Manhole Ring	Per EA	3		
A-30	60.03 95.04	Remove and Replace Valve Box Top Section	Per EA	7		
A-31	60.04	Furnish and Install Fire Hydrant Assembly Single Pumper	Per EA	1		
A-32	60.05	Adjust Key Box	Per EA	20		
A-33	60.08	Decommission Fire Hydrant Assembly	Per EA	1		
A-34	65.02	Construction Survey Measurement	Per LS	1		
A-35	65.02	Two-Person Survey Crew	Per Hour	40		
A-36	70.08 95.04	Remove and Reset Fence	Per LF	1,184		
A-37	70.08 95.04	Remove Fence	Per LF	33		

Bid Proposal

Contractor's Name: _____

	Schedule: A Roadway Improvements					
ITEM NO.	SPEC. NO.	WORK DESCRIPTION		EST. QUANT	UNIT BID PRICE	TOTAL BID PRICE
A-38	70.08 95.04	Remove and Reset Gate	Per EA	1		
A-39	70.10 95.04	Traffic Markings (4" Solid White)	Per LF	399		
A-40	70.10 95.04	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (250 Mil)	Per LF	6,458		
A-41	70.10 95.04	Inlaid Traffic Markings (Methyl Methacrylate) (4" White) (250 Mil)	Per LF	5,003		
A-42	70.10 95.04	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (250 Mil)	Per LF	250		
A-43	70.10 95.04	Inlaid Traffic Markings (Methyl Methacrylate) (Bike Symbols) (250 Mil)	Per EA	20		
A-44	70.11 95.04	Remove and Relocate Signs	Per EA	4		
A-45	70.11 95.04	Standard Sign	Per SF	230		
A-46	70.12 95.04	Traffic Maintenance	Per LS	1		
A-47	70.13	Bollard (Wood)	Per EA	101		
A-48	70.13	Removable Bollard (Wood)	Per EA	3		
A-49	70.13	Remove Bollard	Per EA	2		
A-50	70.17	Relocate Mailbox	Per EA	1		
A-51	70.18	Chain Link Fence (6', 9 Gage)	Per LF	54		
A-52	70.22 95.04	Removal/Disposal And/Or Salvage of Obstructions	Per LS	1		
A-53	70.24 95.04	Temporary Fencing	Per LF	1,184		

Bid Proposal

Total Schedule A _____

Contractor's Name: _____

Bid	Proposal
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		Drainage Improvements				
ITEM NO.	SPEC. NO.	WORK DESCRIPTION		EST. QUANT	UNIT BID PRICE	TOTAL BID PRICE
B-1	20.13	Trench Dewatering	Per LS	1		
B-2	20.13 95.04	Trench Excavation and Backfill (Various Depths)	Per LF	1,261		
B-3	20.15	Furnish Trench Backfill (Type II)	Per Ton	528		
B-4	20.16	Bedding Material (Class D)	Per LF	1,261		
B-5	20.27	Disposal of Unusable or Surplus Material	Per CY	732		
B-6	55.02 95.04	Furnish, Install, and Televise Pipe (12-Inch, Type S, CPEP)	Per LF	658		
B-7	55.02 95.04	Furnish, Install, and Televise Pipe (15-Inch, Type S, CPEP)	Per LF	288		
B-8	55.02 95.04	Furnish, Install, and Televise Pipe (18-Inch, Type S, CPEP)	Per LF	315		
B-9	55.04 95.04	Connect to Existing Storm Drain System	Per EA	4		
B-10	55.05 95.04	Construct (Type I) Manhole	Per EA	4		
B-11	55.05 95.04	Construct (Type II) Manhole	Per EA	2		
B-12	55.05 95.04	Construct (Type I) Catch Basin Manhole	Per EA	2		
B-13	55.05 95.04	Construct (Type II) Catch Basin Manhole	Per EA	2		
B-14	55.05 95.04	Construct (Type II) Bypass Manhole	Per EA	1		
B-15	55.09 95.04	Construct Catch Basin	Per EA	12		
B-16	55.11	Remove Manhole	Per EA	4		
B-17	55.11	Remove Catch Basin	Per EA	7		
B-18	55.22 95.04	Oil and Grit Separator (Stormceptor STC 450i)	Per EA	1		
B-19	55.27 95.04	Storm Drain Bypass System	Per LS	1		

Schedule: B Drainage Improvements

Contractor's Name: _____

Bid Proposal

Sch	Schedule: B Drainage Improvements						
ITEM	SPEC.	WORK DESCRIPTION	EST.	UNIT BID	TOTAL BID		
NO.	NO.		QUANT	PRICE	PRICE		
B-20	70.07 95.04	Remove Pipe Per LF	790				

Total Schedule B

Contractor's Name: _____

ITEM	SPEC.	WORK DESCRIPTION		EST.	UNIT BID	TOTAL BID
NO.	NO.			QUANT	PRICE	PRICE
C-1	80.01 95.04	Temporary Illumination	Per LS	1		
C-2	80.02	Trench and Backfill (2'W x 3.5'D)	Per LF	2,700		
C-3	80.04 95.04	Driven Pile Luminaire Pole Foundations	Per EA	13		
C-4	80.04 95.04	Load Center Foundation (Type 1A)	Per EA	1		
C-5	80.04 95.04	Cast-In-Place Light Column Foundation	Per EA	8		
C-6	80.05	Fixed Base Luminaire Pole	Per EA	13		
C-7	80.06	Luminaire Arm	Per EA	16		
C-8	80.07	Steel Conduit (2 inch)	Per FT	2,820		
C-9	80.08 95.04	Junction Box (Type IA)	Per EA	22		
C-10	80.08 95.04	Junction Box (Type II)	Per EA	1		
C-11	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	Per FT	3,190		
C-12	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	Per EA	1		
C-13	80.23 95.04	Luminaire (40 LED, Medium, Type 2)	Per EA	4		
C-14	80.23 95.04	Luminaire (60 LED, Medium, Type 2)	Per EA	10		
C-15	80.23 95.04	Luminaire (80 LED, Medium, Type 2)	Per EA	2		
C-16	80.23 95.04	Spare Luminaire (40 LED, Medium, Type 2)	Per EA	1		
C-17	80.23 95.04	Spare Luminaire (60 LED, Medium, Type 2)	Per EA	2		
C-18	80.23 95.04	Spare Luminaire (80 LED, Medium, Type 2)	Per EA	1		
C-19	80.28	Remove Luminaire Pole	Per EA	3		

Bid Proposal Schedule: C Illumination Improvements

Contractor's Name: _____

ITEM NO.	SPEC. NO.	WORK DESCRIPTION	EST. QUANT	UNIT BID PRICE	TOTAL BID PRICE
C-20	80.29 95.04	Pedestrian Light Column Per EA	8		
C-21	80.29 95.04	Spare Pedestrian Light Column Per EA	2		

Bid Proposal Schedule: C Illumination Improvements

Total Schedule C_____

Contractor's Name: _____

		Landscaping Improvements				
ITEM	SPEC.	WORK DESCRIPTION		EST.	UNIT BID	TOTAL BID
NO.	NO.			QUANT	PRICE	PRICE
D-1	70.23 95.04	Banners	Per EA	21		
D-2	75.02 95.04	Extended Maintenance	Per LS	1		
D-3	75.02 95.04	Tree, Pinus contorta var. latifolia, 6' height	Per EA	7		
D-4	75.02 95.04	Tree, Betula pendula 'Gracilis', 2" caliper	Per EA	11		
D-5	75.02 95.04	Shrub, Rosa acicularis, 18" height	Per EA	51		
D-6	75.02 95.04	Shrub, Spiraea japonica 'Walbuma', 18" height	Per EA	95		
D-7	75.02 95.04	Shrub, Viburnum edule, 18" height	Per EA	12		
D-8	75.02 95.04	Rock Mulch (6-inch depth)	Per CY	16		
D-9	75.03	Topsoil (4-inch depth)	Per MSF	21		
D-10	75.04	Seeding, Schedule A	Per MSF	9		
D-11	75.04	Seeding, Schedule B	Per MSF	13		
D-12	75.06	Landscape Edging	Per LF	438		
D-13	75.12 95.04	Temporary Tree Protection Fence	Per LF	595		
D-14	75.13 95.04	Root Pruning	Per LF	150		
D-15	75.14 95.04	Moose Protection Fence	Per LF	231		

Bid Proposal Schedule: D Landscaping Improvements

Total Schedule D

Contractor's Name: _____

