

**CITY OF TRAVERSE CITY, MICHIGAN
(Project Name)**

**CITY OF TRAVERSE CITY, MICHIGAN
Standard Specification for Construction
Division 1**

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Section 101. Terms, Format, and Definitions

101.01. General

Except as herein specified, all general requirements, materials and workmanship shall be in accordance with the Standard Specifications for Construction as published by the Michigan Department of Transportation, 2020 edition.

The Contractor is responsible for making their own investigation of all local conditions before bidding as specified in the "Proposal Submission, Award and Execution of Contract", Section 102.

The titles and headings of the sections, subsections, and subparts are intended for reference and are not considered as bearing on their interpretation.

References in the contract to publications refer to the most recent edition, including interim publications that are current as of the advertisement date, unless otherwise specified by the contract.

References in the contract to the Department's procedures for inspection, sampling, testing, and certification of materials refer to the edition of the relevant manuals, Michigan Test Methods (MTMs), MDOT Standard Plans, and *MDOT Standard Specifications for Construction (Standard Specifications)* that is current as of the advertisement date unless otherwise specified by the contract.

101.02. Abbreviations

When the following abbreviations are used in the *Standard Specifications* and in the contract, they have the meanings listed below.

°C	degrees Celsius
°F	degrees Fahrenheit
AAN.....	American Association of Nurserymen
AAR.....	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ABR.....	Certified Bridge Fabricator – Advanced (AISC Certification)
ABS	acrylonitrile butadiene styrene
AC	alternating current
ACA.....	ammoniacal copper arsenate
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association

ACQ	ammoniacal copper quaternary
ACZA	ammoniacal copper zinc arsenate
ADA.....	Americans with Disabilities Act
ADT	average daily traffic
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMS	Aerospace Material Specification
ANSI	American National Standards Institute
APA	Authorized Public Agency
API	American Petroleum Institute
ARA.....	American Railway Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ARTBA	American Road & Transportation Builders Association
ASC.....	Accredited Standards Committee
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASR.....	alkali-silica reactivity
ASTM	ASTM International
ATSSA	American Traffic Safety Services Association
AWG	American Wire Gauge
AWI	Aggregate Wear Index
AWPA	American Wood Protection Association
AWS	American Welding Society
AWWA	American Water Works Association
Blue Book	Equipment Watch's <i>Rental Rate Blue Book for Construction Equipment</i>
BPN.....	British Pendulum Number
BTU	British thermal unit
CA	copper azole
CaCl ₂	calcium chloride
CCA	chromated copper arsenate
centistoke	unit of measurement of kinematic viscosity
cfm	cubic feet per minute
CFR.....	Code of Federal Regulations
CIA	Construction Influence Area

CIE	International Commission on Illumination
CIP	compacted-in-place
CIP	cast-in-place
CJP	complete joint penetration
CMD	cross-machine direction
CNC	computer numerically controlled
Commission	Michigan State Transportation Commission
CPE.....	corrugated polyethylene
cPs	centipoise, a measurement of viscosity
CPT	Bridge Component Quality Management System Certification (AISC Certification)
CPV.....	corrugated polyvinyl chloride
Crg	contraction joint
CRSI	Concrete Reinforcing Steel Institute
CSP.....	concrete surface profile
CSQC	Contractor Staking Quality Control
CW	Civil Works
CWI	Certified Welding Inspector
dB	decibel
DBE.....	Disadvantaged Business Enterprise
DBI	dowel bar inserter
DC	direct current
DFT	dry film thickness
DI	ductile iron (pipe)
EGLE	Michigan Department of Environment, Great Lakes, and Energy
ESAL	equivalent single-axle load
Esc	expansion joint
FAA	Federal Aviation Administration
FC	Fracture Critical Endorsement (AISC Certification)
FCAW	flux-cored arc welding
FCC.....	Federal Communications Commission
FCM	fracture critical members
FHWA	(U.S. Department of Transportation) Federal Highway Administration
Forest Service	USDA Forest Service
FSS	Federal Specifications and Standards
fy	yield point
G*/sin θ	high temperature stiffness

G* $\sin \theta$	intermediate temperature stiffness
g/ft ²	gram per square foot
G _{mm}	maximum specific gravity of mixture
G _{sb}	bulk specific gravity of aggregate
G _{se}	effective specific gravity
GMAW	gas metal arc welding
GPS	Global Positioning System
HDPE	high-density polyethylene
HMA	hot mix asphalt
HP	high performance
HRWR	high-range water reducer
IBR	Certified Bridge Fabricator – Intermediate (AISC Certification)
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IMSA	International Municipal Signal Association
IP	internet protocol
ISA	International Society of Arboriculture
ISO	International Organization for Standardization
ISSA	International Slurry Surfacing Association
ITCP	Internal Traffic Control Plan
ITE	Institute of Traffic Engineers
ITS	Intelligent Transportation Systems
JMF	job mix formula
k	thermal conductivity
kip	1,000 pounds-force
kPa	kilopascal
ksi	kilo-pound per square inch
LA	Los Angeles
LAST	lowest anticipated service temperature
lb/cyd	pounds per cubic yard
lb/ft ³	pound per cubic foot
LBW	loss by washing
LCD	liquid crystal display
LED	light-emitting diode
LL	lane length
LM	loose measure
LMC	latex modified concrete
LRFD	Load and Resistance Factor Design

LRFR	load and resistance factor rating
MASH	Manual for Assessing Safety Hardware
MC	medium curing
MCA	Michigan Concrete Association mcd/lux/sq
m	millicandela per lux per square meter
MCL	Michigan Compiled Laws
MCS	Michigan Coordinate System
MD	machine direction
MDARD	Michigan Department of Agriculture & Rural Development
MDLARA	Michigan Department of Licensing and Regulatory Affairs
MDNR	Michigan Department of Natural Resources
MDOT	Michigan Department of Transportation
mil	thousandth of an inch
MIOSHA	Michigan Occupational Safety and Health Administration
mm	millimeter
MMUTCD	Michigan Manual of Uniform Traffic Control Devices
MPa.....	megapascal
mph	miles per hour
<i>MQAP Manual</i>	<i>MDOT's Materials Quality Assurance Procedures (MQAP) Manual</i>
MSA	Mine Safety Administration
MSA	Michigan Statutes Annotated
MT	magnetic particle testing
MTD	material transfer device
MTM	Michigan Test Method
MTR	Mill Test Report
N/A	not applicable
NaCl	sodium chloride
NBI	National Bridge Inventory
NCHRP	National Cooperative Highway Research Program
NCR	nonconformance report
N _d	design number of gyrations
NDT.....	nondestructive testing
NEC	National Electrical Code
NELMA	Northeastern Lumber Manufacturers Association
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NHPMA	Northern Hardwood and Pine 'Manufacturers Association
N _i	initial number of gyrations

NIST	National Institute of Standards and Technology
N _m	maximum number of gyrations
N _m	Newton meter
NPCA	National Precast Concrete Association
NPDES	National Pollutant Discharge Elimination System
NPT	National Pipe Thread Tapered
NREPA	Natural Resources and Environmental Protection Act
NRMCA	National Ready Mixed Concrete Association
NTCIP	National Transportation Communications for ITS [Intelligent Transportation Systems] Protocol
OD	outside diameter
OD	oven dry
OGDC	open-graded drainage course
OSHA	Occupational Safety and Health Administration
ohm	unit of electrical resistance
OJT	on-the-job training
Pa•s	pascal-second
PAV	Pressure Aging Vessel
P _b	percent asphalt binder content
PCC	Portland cement concrete
pcf	pounds per cubic foot
PCI	Precast/Prestressed Concrete Institute
PCMS	portable changeable message sign
PDF	portable document format
PE	polyethylene
PG	performance-graded
PJP	partial joint penetration
PLSS	Public Land Survey System
PPSS	paver-placed surface seal
psf	pounds per square foot
psi	pounds per square inch
psig	pounds per square in gauge
PT	penetrant testing
PTCSI	Pedestrian Traffic Control Signal Indications
PTS	portable traffic signal
PVC	polyvinyl chloride
QA	Quality Assurance
QAI	Quality Assurance Inspector
QC	Quality Control
rad/s	radian per second

RAP.....	reclaimed asphalt pavement
RC	rapid curing
RCRA	Resource Conservation and Recovery Act
RHW	rubber insulation, heat resistance of 75°C, water resistance
rms	root mean square
RPM	reflective pavement marker
RPM	raised pavement marker
RT	radiographic testing
SAE	Society of Automotive Engineers
SAW	submerged arc welding
SBR.....	Certified Bridge Fabricator – Simple (AISC Certification)
SCM	supplementary cementitious material
SDR	standard dimension ratio
SESC	soil erosion and sedimentation control
SFMC	silica fume modified concrete
SGC	Superpave gyratory compactor
SMAW	shielded metal arc welding
SPE	Sophisticated Paint Endorsement (AISC Certification)
SPIB	Southern Pine Inspection Bureau
SQRT	square root
SSPC	The Society for Protective Coatings
Superpave	Superior Performing Asphalt Pavements
TIG	tungsten inert gas
TON	turn-of-nut
Trg	tied joint
TRM	turf reinforcement mat
TRPM	temporary raised pavement marker
TS	total solids
TS	traffic signal
TSR	tensile strength ratio
UL	Underwriters Laboratories
USC	U.S. Code
USDA	United States Department of Agriculture
USDOT	U.S. Department of Transportation
USE.....	underground service entrance
UT	ultrasonic testing
UV	ultraviolet
VAC	volts alternating current
VDC	volts direct current

VFA	voids filled with asphalt
VMA	voids in mineral aggregate
VT	visual test
VTCSH	Vehicle Traffic Control Signal Heads
WCLIB	West Coast Lumber Inspection Bureau
w/cm ratio	water-cementitious material ratio
WPS	weld procedure specification
WR	wet reflective
WWPA	Western Wood Products Association

101.03. Definitions

Absolute Refusal. The nominal pile driving resistance value of 150% of the nominal pile driving resistance shown on the plans. Also see “Practical Refusal.”

Addendum. Revisions to the plans and/or proposal issued by the Department after the advertisement date but before the submission of the bid.

Adjustment. Monetary revision that applies to a contract unit price or to the entire contract.

Advertisement. Public announcement of a project inviting Contractors to submit bids for work to be performed and materials to be furnished.

Agreement. The contractual agreement between the Contractor and the City of Traverse City.

Authorization. The Department’s written approval of a contract modification.

Average Daily Traffic (ADT). The total volume of traffic during a time period that is greater than 1 day and less than 1 year and divided by the number of days in the time period.

Award. The Department’s formal execution of the contract.

Base Course. Layer or layers of specified material placed on a subbase or subgrade to support a surface course.

Bid. A completed schedule of items submitted as an offer to perform work at quoted prices.

Bid Appeal Committee. City of Traverse City committee that performs the administrative review of appeals of low bid rejections.

Bid Document. An electronic document prepared using current Department software that includes the schedule of items, designated and specialty items, if applicable, and warranty obligations, if applicable.

Bid Guaranty. Amount the Bidder agrees, at the time of bid submission, to pay the City if the Bidder fails to execute the contract form and file satisfactory bonds and other required documents necessary for the award of the contract within the award period provided or within Department-approved extensions.

Bidder

- A. Individual or legal entity submitting a bid.
- B. An affiliated Bidder is a Bidder having a relationship in which one business concern or individual directly or indirectly controls or can control the others.

Bridge. Structure, including supports, built over a depression, watercourse, highway, railroad, or other obstruction with a clear span of at least 20 feet measured along the center of roadway.

Calendar Day. Every day shown on the calendar, beginning and ending at midnight. Unless otherwise specified in the contract, the word “day” means calendar day.

Calendar Date Contract. Contract in which the project is required to be physically complete or open to traffic on or before a designated date on the calendar.

Calendar Day Contract. Contract in which the time required to physically complete the project or open it to traffic is designated by the number of calendar days.

Certification of Disadvantaged Business Enterprise (DBE) Contractor.

Process in which the Department establishes that a Contractor meets the federal requirements of a DBE. Also see “Disadvantaged Business Enterprise.”

Change. Addition to or deletion from a pay item or condition.

City. The City of Traverse City represented by the City Engineer, or their authorized representative.

Commission. Traverse City, City Commission.

Construction Influence Area (CIA). The project and the area surrounding the project, as shown in the contract, that define the limits of responsibility for traffic control.

Contract. Written agreement between the Department and the Contractor setting forth the obligations of the parties for the performance of and payment for the prescribed work. The contract includes the advertisement for bids, bid document, contract form, contract bonds, Standard Specifications, special details, MDOT Standard Plans, plans, proposal, addenda, notice of award, local agency agreements (when applicable),

DBE commitment forms (when applicable), and warranty forms and bonds (when applicable).

Contract Modification. Regulation form prepared as a recommendation for changes in, adjustments to, or extras to the contract. The contract modification becomes an authorization (an approved modification) when it is signed by the duly authorized City representative. Also see "Authorization."

Contract Time. Time specified in the contract to perform and complete all the work, including authorized extensions of time.

Contract Unit Price. Unit price of a pay item.

Contractor. Individual, partnership, corporation or a combination of any or all jointly undertaking the execution of the work under the terms of the Contract and acting directly or through agents or employees.

Controlling Operation. An operation that, if the Contractor's expected rate of performance is not met or the scheduled start date is delayed, would delay the opening to traffic or completion of the entire project. A controlling operation may be on or off the job site. The size of the operation is not a factor in determining whether an operation is a controlling operation. Any operation on the critical path is a controlling operation (see "Critical Path").

Coordination Clause. Clause in the contract that requires the Contractor to coordinate construction activities with agencies, utilities, or other Contractors.

Critical Path. Longest continuous path of activities through the contractual completion milestones in the schedule that establishes the scheduled completion date. The critical path is typically the path of activities with the least total float. The critical path may follow different paths of activities at different times during the performance of the work due to the progress of the work or revisions made to the schedule. Any operation on the critical path is a controlling operation.

Culvert. Structure, including supports, built over a depression, watercourse, highway, railroad, or other obstruction, with a clear span of less than 20 feet measured along the center of roadway.

Department. The Engineering Department of the City of Traverse City.

Design Pile Length. Pile length shown on the plans.

Design Pile Tip Elevation. Pile tip elevation if the design pile length is shown on the plans.

Designated Classifications. Work classifications that the Department lists in the proposal as the major work classifications required to construct the

project and requiring appropriate prequalification to perform the specified work.

Determined Low Bidder. The Bidder determined to have the lowest total bid for a project and to meet all project requirements.

Director. The person, as provided by law, to serve as the principal executive officer of the Department and to be responsible for executing the policies of the Commission.

Disadvantaged Business Enterprise (DBE). The definition as provided in 49 CFR 26.5.

Dynamic Formula. Empirical formula used to estimate nominal pile driving resistance during pile driving. The Federal Highway Administration (FHWA) Gates formula is specified.

Dynamic Testing. High strain dynamic testing conducted during pile driving to estimate the nominal pile driving resistance using instrumentation and signal-matching computer software.

Earth Grade. Elevation of the completely graded roadway before the pavement structure is placed.

Engineer. The City Engineer of the City of Traverse City, or their authorized representative.

Estimate

- A. **Final Estimate.** Compilation of quantities showing work performed upon which final payment is made.
- B. **Progress Estimate.** Estimate made as the work progresses showing estimated work performed and materials furnished upon which periodic payments are made.

Estimated Pile Length. Length shown on the plans used as a guide for estimating the work and ordering test piles if the nominal pile driving resistance is shown on the plans.

Estimated Pile Tip Elevation. Elevation shown on the plans, estimated for piles to develop the nominal pile driving resistance.

Extension of Time. Additional contract time authorized by the Department.

Extra Work. Work determined to be essential to the satisfactory completion of the contract but that does not appear in the proposal as a specific pay item and is not included in the price bid for other items in the contract.

Falsework. Any temporary facility/device used to support a permanent structure until the structure is self-supporting. Falsework includes, but is not limited to, steel or timber beams, girders, columns, piles and

foundations, and any propriety equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

Float. The total available time to complete a non-controlling operation or sequence of non-controlling operations, as designated by the Contractor in the progress schedule, minus the total planned duration associated with the non-controlling operation or sequence of non-controlling operations. Float within the schedule is not for the exclusive use or benefit of the Department or the Contractor but is a resource available to both parties as needed until it expires.

Forms. Facility, device, or mold used to retain plastic or fluid concrete in its designated shape until it hardens.

Geohazard. Harmful event caused by a geological process (e.g., earthquake, landslide, tsunami, volcano).

Grade Separation. Structure that provides for highway traffic, pedestrian traffic, or utilities to pass over or under another highway or the tracks of a railway.

Highway. General term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Holidays. Recognized state holidays are New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving Day, Christmas Eve, Christmas Day, and New Year's Eve.

Inspector. Representative of the Engineer assigned to test materials, perform inspections of contract performance, or both.

Laboratory. Testing laboratory operated by or designated by the Department.

Labor Dispute. Controversy between the Contractor and the Contractor's employees, union, bargaining agents, suppliers, or suppliers' bargaining agents or between unions that results in a work stoppage.

Lien Bond. The security furnished by the Contractor and the Contractor's surety to guarantee payment of the debts covered by the bond.

Limits of Earth Disturbance. Area extending 10 feet outside the slope stake line except adjacent to wetlands where the limits of earth disturbance are at the slope stake line.

Liquidated Damages. Monetary damages paid at a specified rate by the Contractor to the Department for work not completed by the completion dates or within specified time frames.

Local Traffic. Traffic that has origin or destination within the CIA.

Major and Minor Pay Items. Pay items with an original item value that meets any of the criteria listed below are considered major pay items. All other

original pay items are considered minor. The original item value is the product of the plan quantity of the pay item and the contract unit price.

- A. The original contract amount is less than or equal to \$5,000,000 and the original item value is equal to or greater than 5% of the original contract amount.
- B. The original contract amount is greater than \$5,000,000 but less than or equal to \$20,000,000 and the original item value is equal to or greater than 4% of the original contract amount but not less than \$250,000.
- C. The original contract amount is greater than \$20,000,000 but less than or equal to \$30,000,000 and the original item value is equal to or greater than 3% of the original contract amount but not less than \$800,000.
- D. The original contract amount is greater than \$30,000,000 and the original item value is equal to or greater than 2% of the original contract amount but not less than \$900,000.
- E. If no major pay items are identified using the criteria in A through D above, then the major pay item or items are all of the original pay items, in sequence from the greatest original item value to the next lower item value and so on, until the total original value of the items adds up to 60% of the original contract amount.

Materially Unbalanced Bid. Bid that generates a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid will not result in the lowest ultimate cost to the Department.

Mathematically Unbalanced Bid. Bid containing lump sum or unit price bid items that do not reflect reasonable actual costs of labor, equipment, and materials, plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs.

Maximum Unit Weight or Maximum Density. Maximum value of the weight per unit volume established for a material.

MDOT Standard Plans. Drawings approved for repetitive use, showing details to be used where appropriate. The MDOT Standard Plans that apply to the project will be designated in the contract.

Median. The portion of a divided highway separating the traveled ways.

Michigan Registered Service Agency. Definition in MCL 290.602.

Minimum Pile Length. Length between pile cutoff elevation and the minimum pile penetration elevation shown on the plans.

Minimum Pile Penetration Elevation. Elevation shown on the plans that the bottom of piles must be driven to or below.

Net Prequalification. Current balance of the Bidder's established prequalification rating. The current balance is obtained by subtracting the uncompleted work on hand from the established rating.

Nominal Pile Driving Resistance. Nominal pile driving resistance measured during pile driving using the dynamic formula or dynamic testing methods in kips, as shown on the plans. Also see "Dynamic Formula" and "Dynamic Testing."

Non-Controlling Operation. An operation that, if the Contractor's expected rate of performance is not met or the scheduled start date is delayed, would not delay the opening to traffic or completion of the entire project. A non-controlling operation may be on or off the project site. The size of the operation is not a factor in determining whether an operation is a non-controlling operation. Also see "Controlling Operation."

Notice of Award. Written notice to the Contractor that the contract has been awarded.

On-the-Job Training (OJT) Program. MDOT's OJT program meets the requirements of the Federal-Aid Highway Act of 1970 and 23 CFR Part 230, Subpart A. The objective is to develop skill improvement programs to provide opportunities for unskilled workers, particularly minorities, women, and disadvantaged persons, to acquire training in the skilled construction trades.

Ordered Pile Length. For timber piles, the Engineer will determine the ordered pile length. For cast-in-place concrete piles and steel piles, the Contractor will determine the ordered pile length.

Owner. The City of Traverse City.

Pay Item. Item of work in the contract. Also see "Major and Minor Pay Items."

Pavement Structure. All combinations of subbase, base course, and surface course, including shoulders, placed on a subgrade.

Performance Bond. The security furnished by the Contractor and the Contractor's surety to guarantee performance of the work in accordance with the contract.

Plan Grade. Vertical control grade shown on the plans.

Plan Quantity. Original contract quantity of a pay item.

Plans. Contract drawings that show the location, character, and dimensions of the prescribed work. Contract drawings also include the MDOT Standard Plans.

Practical Refusal. The nominal pile driving resistance value of 110% of the nominal pile driving resistance shown on the plans. Also see "Absolute Refusal."

Prebore Elevation. Elevation designated for stopping preboring, as shown on the plans.

Production Piles. Piles other than test piles.

Progress Clause. The part of the proposal with the starting date, all intermediate and completion dates or the number of work days or both, and other restrictions or conditions.

Progress Schedule. Sequential listing of all of the controlling operations and the estimated time the operations will be controlling. The progress schedule is submitted by the Contractor after award and prior to starting work. It is reviewed and approved by the Engineer.

Project. The section of a highway or property on which the construction operation is to be performed as described in the contract.

Project Limits. The physical limits in the contract showing the points of beginning and ending of the work included in the project.

Proposal. Document with information on the project that is being advertised for bid. The information includes the location and description of work, schedule of items, progress clause, bid guaranty amount, date and time for electronic submission and downloading of bids, Special Provisions, Supplemental Specifications, or other requirements that may vary from or that are not contained in the Standard Specifications or plans, and the applicable wage rates to be paid by the Bidder.

Qualified Products List. List of materials that have been prequalified for use on projects.

Redrive. Pile driving beyond 3 inches or beyond the first 20 blows, whichever occurs first, after the end of drive.

Resident Project Representative. Engineer.

Restrike. Pile driving to move the pile an additional 3 inches or the first 20 blows, whichever occurs first, after the end of drive.

Right-of-Way (ROW). General term denoting land, property, or interest therein acquired for or devoted to a highway, as shown on the plans.

Roadbed. Portion of the roadway between the outside edges of finished shoulders or the outside edges of berm immediately back of curbs or gutters, when constructed.

Roadside. Portion of the right-of-way outside the roadway.

Roadway. Portion of the right-of-way required for construction, limited by the outside edges of slopes and including ditches, channels, and all structures pertaining to the work.

Seasonal Limitation. Time during which construction of work items will be suspended unless otherwise specified in the contract.

Seasonal Suspension. Period from November 15 through April 15 unless specified otherwise in the contract.

Segregation. Areas of non-uniform distribution of material components that are visually identifiable or can be determined by other methods.

Shoulder. Portion of the roadway adjacent to the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Sidewalk. Portion of the roadway constructed primarily for pedestrian use.

Specialty Classifications. Work classifications that the Department considers to require specialized equipment or crafts to an extent warranting being listed separately from the designated classification in the proposal.

Specifications. General term applied to all written directions, provisions, and requirements concerning the performance of the work.

- A. MDOT Standard Specifications for Construction (Standard Specifications). All requirements and provisions contained in subsequent divisions after Division 1.
- B. Supplemental Specifications. Detailed specifications that modify and supersede the *Standard Specifications*.
- C. Special Provisions. Detailed specifications that modify and supersede the *Standard Specifications* and Supplemental Specifications, applicable to an individual project.

Spuds. Short, strong, driven members removed to make holes for inserting piles.

State

- A. The State of Michigan or the Michigan Department of Transportation Department, or both, when the State is the awarding authority;
- B. The County when a County is the awarding authority; or
- C. The Municipality when a City or Village is the awarding authority.

Station. When used as a definition or term of measurement, a station is 100 feet.

Subbase. Layer of specified material placed on the subgrade as part of the pavement structure.

Subcontractor. Individual or legal entity that performs part of the work through a contract agreement with the Contractor.

Subcontract. Written agreement between the Contractor and any individual or legal entity to perform a part of the contract work.

Subgrade. Portion of the earth grade upon which the pavement structure is placed.

Substructure. All of the structure below the bearings of simple and continuous spans, the skewbacks of arches, and the tops of footings of rigid frames, including backwalls, wingwalls, and wing protection railings; except backwalls designed integrally with the superstructure.

Superstructure. All of a structure not classified as substructure.

Surety. Legal entity or individual other than the Contractor executing a bond(s) furnished by the Contractor.

Surface Course. Top layer of a pavement structure.

Temporary Road. Roadway and appurtenances constructed to help the movement of highway and pedestrian traffic around a construction operation.

Temporary Route. Existing road over which the traffic is temporarily detoured around a construction operation.

Temporary Structure. Bridge, culvert, or grade separation constructed to maintain traffic during the construction or reconstruction of a bridge, grade separation, or culvert.

Test Pile. Pile driven at a location shown on the plans to determine pile driving characteristics. The Engineer will certify nominal pile resistance of a test pile using a static load test, dynamic formula, or dynamic testing methods.

Ton. Unit of weight equal to 2,000 pounds.

Traffic Control Devices. Signs, signals, lighting devices, barricades, delineators, pavement markings, traffic regulators, and all other equipment for protecting and regulating traffic in accordance with the *Michigan Manual of Uniform Traffic Control Devices* (MMUTCD), unless otherwise specified in the contract.

Traffic Lane. Portion of the traveled way used for the movement of a single line of vehicles.

Traffic Regulator. Person assigned to direct traffic, dressed and equipped as specified in the MMUTCD.

Traveled Way. Portion of the roadway designated for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Utility(ies). Properties of railway, telegraph, telephone, water, sewer, electric, gas, petroleum, cable television, and similar companies.

Waters of the State. “Groundwaters, lakes, impoundments, open drains, rivers, wetlands, streams and all other watercourses and waters, including the Great Lakes and their connecting waters, within the jurisdiction of this state [Michigan]” (MCL 324.3101(aa)).

Work. The furnishing of all labor, materials, equipment, and other items necessary to complete the project according to the contract. Work includes all alterations, amendments or extensions thereto, made by work order or other written orders of the Engineer.

Work Day (Working Day). All days when, as determined by the Engineer, it is possible for the Contractor to effectively carry out work on the controlling operation.

Work Day Contract. A contract in which the time required to physically complete the project or open it to traffic is designated by the number of work days.

Working Drawings. Supplemental design sheets or similar data that the Contractor may be required to submit to the Engineer. Examples include, but are not limited to, design calculations, stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, and bending diagrams for reinforcing steel.

Work Order. Written order by the Engineer requiring performance by the Contractor.

Section 102. Bid Submission, Award, and Execution of Contract

102.01. Qualification of Bidders

The City reserves the right to require, prior to the award of the contract, a statement of facts in detail of the business and technical organization and plant of the bidder available for the contemplated work, including the financial resources and experience of the organization in construction of comparable work.

The bidder may be required before the award of any contract to show to the complete satisfaction of the City of Traverse City that it has the necessary facilities, ability and financial resources to provide the services specified therein in a satisfactory manner. The bidder may also be required to give a past history and references in order to satisfy the City of Traverse City in regard to the bidder's qualifications. The City of Traverse City may make reasonable investigations deemed necessary and proper to determine the ability of the bidder to perform the work, and the bidder shall furnish to the City of Traverse City all information for this purpose that may be requested. The City of Traverse City reserves the right to reject any bid if the evidence submitted by, or investigation of, the bidder fails to satisfy the City of Traverse City that the bidder is properly qualified to carry out the obligations of the contract and to complete the work described therein. Evaluation of the bidder's qualifications shall include:

- A. The ability, capacity, skill and financial resources to perform the work or provide the service required.
- B. The ability of the bidder to perform the work or provide the service promptly or within the time specified, without delay or interference.
- C. The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- D. The quality of performance of previous contracts or services.

Bidders shall be well qualified in the type of work which is included in this bid. Bids are solicited only from those who will start work promptly after the award is made.

The opening and reading of the bid shall be construed as an acceptance of the bidder as a responsible bidder. The City reserves the right to determine

the responsibility of the bidder from its knowledge of the bidder's qualifications or from other sources.

Any one or more of the following causes may be considered sufficient for the disqualification of a bidder and the rejection of his bid or bids:

- A. Evidence or collusion among bidders.
- B. Lack of competence as revealed by either financial, experience or plant equipment statements as submitted.
- C. Lack of responsibility as shown by past work, judged from the standpoint of workmanship and progress.
- D. Uncompleted or poorly completed work under other contracts, which, in the judgment of the City Engineer, might hinder or prevent the prompt completion of the work or additional work, if awarded.
- E. Being in arrears on existing contracts, having an outstanding indebtedness to the City without a claim thereto, in litigation with the City or having defaulted on a previous contract.

A party who has quoted prices to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the work.

102.02. Contents of Proposal

The plans, specifications, and other documents designated in the proposal are considered part of the proposal whether attached or not.

102.03. Interpretation of Bid Items in the Proposal

The Department will use estimated quantities in the schedule of items to compare bids.

102.04. Examination of Plans, Proposal, and Work Site

Prior to submitting a bid, the Bidder must:

- A. Examine the proposal, plans, and the work site to understand the local conditions affecting the work and the detailed requirements of construction.
- B. Upon discovery of uncertainties, inconsistencies, errors, omissions, or conflicts during the examination of the proposal, plans, and work site, notify the Department representative identified in the proposal using Department-approved procedures.

- C. Be familiar with all requirements of federal, state, and local laws, ordinances, and permits that may directly, or indirectly, affect performance of the work.

Prior to submission of a bid, bidder shall make and shall be deemed to have made a careful examination of the site, plans, specifications, contract documents and forms of construction agreement as included herewith, and shall have become informed as to the location and nature of the proposed construction, the transportation facilities, general local conditions and all other matters that may affect the cost and time of completion of the project.

Ignorance of conditions that now exist or that may hereafter exist, or of any conditions or difficulties that may be encountered in the examination of the work as a result of failure to make such examination or becoming so informed, will not be accepted as an excuse for any failure or omission on the part of the bidder to fulfill in every respect all of the requirements of the contract, and will not be accepted as a basis for any claim for extra compensation or extension of time.

Drawings and specifications are issued to all bidders as complete sets including all engineering, architectural, mechanical and electrical work. Bidders for each trade are responsible for informing themselves of work required to be performed by other trades and of their own responsibility in the coordination and interfacing of all work involved.

The Department considers the submission of a bid as prima facie evidence that the Bidder examined the proposal, plans, and the project site and understands the requirements of the proposal package and conditions at the project site.

The Bidder must not take advantage of errors or omissions in the proposal that could make the bid mathematically or materially unbalanced.

Any errors or ambiguities in the plans and specifications that are discovered by the bidder should be reported to the City Engineer before the date of opening bids. The successful bidder shall have no claims for extras for any errors which may occur which are not reported to the City Engineer prior to opening of bids. All items not specifically mentioned herein which are obviously necessary to make a complete working installation shall be included. In case of dispute concerning the true intent and meaning of these specifications, the City Engineer shall interpret the same, and their interpretations shall be accepted by the successful bidder as final.

Failure to notify the Department of errors and omissions may result in the Department's rejection of the bid.

102.05. Preparation of Bid

The bid must be prepared in accordance with current Department procedures.

The Bidder must include, and will be deemed to have included, in its bid and contract price all applicable taxes that have been enacted into law as of the date the bid is submitted.

102.06. Reserved

102.07. Delivery of Bid

The Bidder must submit the bid in the manner and before the deadline specified in the Instructions to Bidders.

102.08. Withdrawal or Revision of Bid

The Bidder may withdraw or revise a bid before the deadline for submission of bids by making a request in writing to the City Engineer: No explanation is required. The written withdrawal must be delivered or emailed. The Department will consider only the last bid submitted by a Bidder, identified by date and time.

A bidder may also withdraw a bid if the City fails to award or issue a notice of intent to award the bid within sixty (60) days after the date fixed for the opening of bids. However, no bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work for the person to whom the contract is awarded or otherwise benefit from the contract.

102.09. Downloading of Bids

Not applicable.

102.10. Bid Review

The Department will review bids for mathematical accuracy to determine the apparent low Bidder. The Department will review the bid of the apparent low Bidder to verify compliance with the bidding requirements. If the Department determines the apparent low Bidder's bid is subject to rejection due to bidding irregularities, the Department will repeat the verification process with the next apparent low Bidder until a bid meets the bidding requirements. The Department will refer bids of apparent low Bidders subject to rejection to the Bid Review Committee for review and decision.

102.11. Bid Rejection

Any bid conditioned in whole or in part on the revision or omission of any requirement or provision in the specifications or accompanying documents as issued to prospective bidders or in the including of any requirements or provision not contained therein will be rejected as a qualified bid and no award will be made to a bidder on such bid.

102.12. Reserved**102.13. Consideration of Bids**

To determine the low Bidder, the Department will compare the bids based on the total bid amounts (the sum of lump sum amounts and the products of the estimated quantities and unit prices). For a discrepancy between the calculated total and the total shown in the bid, the Department will use the unit prices entered in the bid and correct the errors found in the calculations.

The Department may reject bids, waive irregularities, advertise for new bids, or do the work in other ways in the Department's best interest. The decision by the Department to act in its best interest will not entitle Bidders to payment for preparing bids or anticipated profits.

102.14. Execution and Award of Contract

Award of the contract will be made with reasonable promptness by notice to the responsible bidder whose bid conforms to the specifications and is the most advantageous to the City.

The Department will provide the contract and bond forms electronically to the determined low Bidder. The low Bidder will receive electronic notification at the e-mail address provided to the Department. The determined low Bidder will be responsible for the transmittal of documents to the Bidder's surety and subcontractors, where appropriate, and the coordination of the electronically signed documents for return to the Department. Within 14 calendar days of transmittal, the Bidder must return, and the Department must receive, electronically executed contract, bond forms, and other documents required by the Department. The Department may grant an extension of that deadline if the extension would not impair the Department's interests. If the Department executes a contract received after the deadline, an extension will be deemed to have been granted.

Required documents include:

1. A contract executed by the bidder's authorized representative, The successful bidder must sign the contract in the form that is a part of this bid packet. No contrary provisions in a bid will supersede or negate the contract. The successful bidder must sign the contract within fourteen (14) days of the City submitting

the contract to the successful bidder for signatures after the award of the bid.

2. 2. A bid bond or bid deposit in the form of a bank check, cashier's check or certified check in the amount of five percent (5%) of the amount of the bid made payable to the City of Traverse City shall accompany each bid. The bid bond shall be with a surety company with an A.M. Best rating of 'A' or better, U.S. Treasury Department listed and admitted to do business in the State of Michigan. The surety shall be acceptable to the City of Traverse City. The bid deposit of all except the three lowest bidders will be returned within seventy-two (72) hours after the opening of the bids. The bid deposit of the three lowest bidders will be returned within forty-eight (48) hours after the successful bidder has executed the contract and furnished the required bonds and certificates of insurance. The failure of the bidder to accept an award and file acceptable performance and payment bonds within fifteen days after notification of award shall be just cause for cancellation of the award and the forfeiture of the bid surety to the City of Traverse City as liquidated damages. Award may then be made to the next lowest responsive and responsible bidder.
3. The contract will not be finalized until all submittals, guarantees, bonds, certifications, licenses and affidavits required for work on equipment as specified are satisfactorily filed with the Engineer and City.

When required, the Contractor shall provide notarized copies of all valid licenses and certificates required for performance of the work. The notarized copies shall be delivered to the City Engineer no later than ten days after the Contractor received the notice of award from the City Engineer. Current notarized copies of licenses and certificates shall be provided to the City Engineer within twenty-four hours of demand at any time during the contract term. Licenses and certificates required for this contract include, by way of illustration and not limitation, any licenses that may be required to be held by engineers, architects, health professionals, pesticide or herbicide applications technicians, asbestos removal contractors, etc.

If the determined low Bidder withdraws its bid submittal after opening and at any time prior to contract award, the Bidder may forfeit its bid guaranty subject to the provisions of the Contract.

If the Department does not receive the signed contract, bond forms, and other documents required within 14 calendar days of transmittal to the Contactor, or within an extended deadline, the Department may award the contract to the

next low Bidder or otherwise exercise its discretion in accordance with subsection 102.13.

If the Department does not execute the contract within 60 calendar days after the transmittal of the contract to the Contractor (including Department approved extensions), the determined low Bidder may withdraw its bid without penalty. If the Department is responsible for the delay in award of the contract, the determined low Bidder may agree to extend the deadline for the execution of the contract for an agreed-upon time period.

The Department considers the contract awarded and binding when signed by the determined low Bidder and executed by the Department.

102.15. Requirements of Contract Bonds

The successful bidder will be required to furnish surety bonds from a surety company with an A.M. Best rating of 'A' or better, U.S. Treasury Department listed and admitted to do business in the State of Michigan. The surety shall be acceptable to the City of Traverse City. Each bond shall be on the AIA Document A312 forms provided as follows:

- A. Performance Bond. The Contractor, as Principal, shall furnish a surety bond in an amount at least equal to one-hundred (100%) percent of the contract amount as security for faithful performance of this contract. The City of Traverse City shall be the Obligee under said bond. The bond shall guarantee the faithful performance and shall indemnify and save harmless the City from all costs and damages by reason of the Principals failure to perform in accordance with the contract provisions. The contract, by reference, shall be an integral part of the bond.

The above mentioned AIA Document A312 shall be modified to include the maintenance and guarantee obligations in the amount of not less than one hundred percent (100%) of the Contract price in favor of the City of Traverse City to keep in good order and repair any defects in all of the work extending for a period of one year from the date of payment of the final pay request or acceptance of construction.

The above named Contractor for a period of one year from the date of final payment by the City of all project work identified in the contract shall keep in good order and repair any defect in all the work done under this contract either by the Contractor or his subcontractors, or his material suppliers, that may develop during said period due to improper materials, defective equipment, workmanship, or arrangements, and any other work affected in

making good such imperfections or defects, shall also be made good, all without expense to the City by notice served in writing, either personally or by mail, on the Contractor and on the surety at the address provided on the Performance Bond as required by the Specifications attached hereto and will proceed at once to make such repairs as directed by said the City, and in case of failure so to do within one week from the date of service of such notice, or within a reasonable time not less than one week, as shall be fixed in said notice, then the said City shall have the right to purchase such materials and employ such labor and equipment as may be necessary for the purpose, and to undertake, do and make such repairs, and charge the expense thereof to, and receive same from said principal or surety. (If any repair is necessary to be made at once to protect life or property, then and in that case, the City may take immediate steps to repair or barricade such defects without notice to the Contractor or the surety.) In so procuring the materials and employing labor and equipment, the City shall not be held to obtain the lower figures for the doing of the work, or any part thereof, but all sums actually paid therefore shall be charged to the Contractor or the surety. If the said Contractor for a period of one year from the date of final acceptance by the City of all project work identified in the contract shall keep work so constructed under said contract in good order and repair, and shall whenever notice is given as herein before specified, at once proceed to make repair as in said notice directed, or shall reimburse said City from all suits and actions for damages of every name and description brought or claimed against it for or on account of any injury or damage to person or property received or sustained by any party or parties, by or from any of the acts of servants, agents, or employees, in the prosecution of the work included in the contract, and from any and all claims arising under the Workmen's' Compensation Act of the state of Michigan, then the above obligation shall be void, otherwise to remain in full force and effect.

- B. Payment Bond. The Contractor, as Principal, shall furnish a surety bond in an amount equal to one-hundred (100%) percent of the contract amount as security for the prompt payment to all subcontractors and persons supplying labor, equipment and material in the performance of all work under said contract, and any and all authorized modifications under this contract. The contract, by reference, shall be an integral part of this bond.

102.16. Bid Guaranty Payment

The determined low Bidder's failure to sign the contract and submit satisfactory bonds and other required documents for the award of the contract within the 21-calendar day period provided, or within a Department-approved extension to that period, will result in the payment of the bid guaranty to the awarding authority.

Each Bidder has a duty to carefully prepare and check the accuracy of its bid. The Department will return the bid guaranty only if the Bidder clearly demonstrates the following:

- A. The Bidder made a substantial error, and signing the contract would impose a substantial and unjustified hardship on the Bidder, given the size and nature of the project; or
- B. Extraordinary circumstances beyond the control of the Bidder exist in which signing the contract would impose a substantial and unjustified hardship on the Bidder, given the size and nature of the project.

A Bidder's mistake in judgment in preparing the bid will not warrant non-payment of the bid guaranty absent a compelling reason that enforcing payment of the guaranty would be unconscionable under all circumstances. The Bidder is responsible for clearly and convincingly satisfying the criteria for non-payment of the bid guaranty.

The Bidder must request the return of the bid guaranty in writing to the City Engineer or designee. The Bid Appeal Committee will consider and render a decision on the request for non-payment. The Bidder must file the written request with the Department within 15 calendar days after the Department mails notice that the Bidder must forfeit the bid guaranty.

The Committee may require that the Bidder produce original bid documentation and submit other information to enable the Committee to decide if the Bidder is entitled to the return of the bid guaranty. The Committee may also request that Department staff review the documentation and other information and make a recommendation to the Committee. When the Committee, in its sole determination, finds that the documentation and other information provide a partial justification, the Committee may make a correspondingly partial reduction of the bid guaranty. The Committee's decision is final and binding.

If the Committee makes an adverse decision, or the Bidder fails to file a timely request for return or cancellation of the bid guaranty, the Bidder must make the bid guaranty payment within 20 calendar days after the Department mails a final demand for payment. If the Bidder does not make the payment within

20 calendar days, the Department will withhold the payment sum from money owed the Bidder, or it may become due and owing to the Bidder.

Bidding practices, competitive considerations, and last-minute price changes commonly result in item prices that, in isolation, could be mischaracterized as bid errors. The Department intends payment of the bid guaranty to deter Bidders from manipulating the competitive process by mischaracterizing such item prices as bid errors to justify withdrawal of low bids after the downloading of all bids. Payment of the bid guaranty also constitutes liquidated damages for failure to sign the contract since it is difficult to determine the actual damages for the breach given that they are uncertain in nature and impossible to estimate with certainty. The damages include the various administrative costs as well as other losses, damages, and costs resulting from the failure of the Bidder to sign the contract. A determined low Bidder who withdraws its bid prior to contract award cannot participate as a subcontractor, supplier, or trucker on the project.

102.17. Reserved

102.18. OJT Program

If required, contractors assigned OJT trainees based on the past contract volume of federal-aid work performed with MDOT are required to fulfill all of the requirements of the OJT program at no additional cost to the Department in accordance with the current *On-the-Job Training Program Manual*.

102.19. Evaluation of Contractor Performance

Not Applicable.

102.20. Joint Two-Party Checks

Not applicable.

Section 103. Scope of the Work

103.01. Intent of the Contract

The intent of the contract is to provide for the successful performance and completion of the work. The Contractor must perform the work as specified in the contract. The scope of the work consists of furnishing all materials, equipment and labor for completing the project as shown on the plans and referred to in these specifications.

103.02. Revisions to the Contract

- A. **General.** The City Engineer shall have the right to require change in, addition to, or deductions from the work required by the contract documents provided that if changes, additions or deductions are made, the general character of the work as a whole is not changed thereby. Adjustments in the contract price, if any, because of any change, addition or deduction in the work shall be determined as hereinafter provided, and any claims for extension of time for completion shall be adjusted at the time of ordering the change, addition or deduction. No claim for change, addition, deduction, or adjustment of price, or extension of time for completion thereof, shall be made or allowed unless done in pursuance of an order from the City Engineer specifically authorizing such change, addition or deduction. Where the order diminishes the quantity of work to be done, this shall not constitute a basis for a claim for damages or anticipated profits on the work that may be dispensed with.

It is understood and agreed that in case of any change in, addition to, or deduction from the work is required, said change shall in no way invalidate the Contract and shall not affect or discharge the bonds furnished by the Contractor.

The Department will pay the Contractor for revisions to the contract in accordance with subsection 109.05 and grant extensions of time for revisions to the contract in accordance with section 108.

If the Contractor believes that one of the following subsections applies, the Contractor must notify the Engineer in accordance with subsection 103.03.B. If the Engineer and the Contractor do not agree as to whether one of the following subsections applies, the Contractor is directed to follow the provisions of the Dispute Resolution section of the Agreement.

- B. **Significant Changes in the Character of Work.** The City's change order process described in Section A above must be fully executed prior to any additional work commencing.

The Contractor may not make a claim for an adjustment under the contract after the Contractor has received the final payment under the contract.

- C. **Reserved.**

- D. **Suspension of Work Ordered by the Engineer.** If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation or contract time is due as a result of such suspension or delay, the Contractor must submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request must set forth the reasons and support for the adjustment in accordance with subsection 103.03.B.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost or time required for the performance of the contract has increased as a result of the suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any tier, and the suspension was not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing. The Contractor will be notified of the Engineer's determination whether or not an adjustment of the contract is warranted in accordance with subsection 103.03.C.

No contract adjustment will be allowed unless the Contractor has submitted a request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

- E. **Extra Work.** The Engineer may, at any time during the progress of the contract, order extra work. The Engineer will provide the Contractor with a work order stating the location, kind, and estimated quantity of the extra work the Contractor is to perform. Costs for the extra work will be negotiated based on subsection 109.05.
- F. **Eliminated Work.** The Engineer may eliminate all or a portion of any pay item.

The Department will compensate the Contractor a fair and equitable amount for all direct costs incurred on the portion of pay item work not yet completed prior to the elimination of the pay item.

103.03. Contractor-Engineer Communication

- A. **General.** The specified time limits may only be extended through a written, jointly signed agreement between the Contractor and the Engineer.
- B. **Written Notice, by Contractor.** The written notice required by subsection 103.02 should include the following:
 - 1. A description of the situation;
 - 2. The time and date the situation was first identified by the Contractor;
 - 3. The location of the situation, if appropriate;
 - 4. A clear explanation of why the situation requires a revision to the contract, including appropriate references to the pertinent portions of the contract;
 - 5. A statement of the revisions deemed necessary in the contract price(s), delivery schedule(s), phasing, time, etc. Because of its preliminary nature, the Department recognizes that this information may rely on estimates;
 - 6. An estimate of the time by which the Engineer must respond to minimize cost or delay, if applicable; and
 - 7. Anything else that will help achieve timely resolution.
- C. **Written Response by Engineer.** Within 7 calendar days of receiving the Contractor's written notice, or sooner if possible, the Engineer will provide a written response that includes one of the following:
 - 1. Confirmation of the need for a revision to the contract and a statement of the applicable subsections of section 108 and subsection 109.05 under which the revision is determined. If the work covered by the revision is complete at the time of the response, the Engineer will include the applicable contract modification in the response. An extension of time, if one is necessary, will be determined in accordance with section 108 and the result included. Compensation for the revision, if any is necessary, will be determined in accordance with subsection 109.05, and the result will be included.

2. Denial of the request for a revision to the contract, in which case the Engineer will make it clear, through reference to the contract, why the issue does not require a revision to the contract.
 3. A request for additional information, in which case the Engineer will state clearly what is needed and by when; the Engineer will issue a final response within 7 calendar days of receiving the additional requested information or sooner if possible.
- D. **Contractor's Recourse.** If the Contractor disagrees with the Engineer's final written response or the Engineer's response is untimely, the Contractor may pursue a claim in accordance with the Contract.

Section 104. Control of the Work

104.01. Authority of Department

The City Engineer will be the City's representative during construction of the Project. The City Engineer may appoint Resident Project Representatives who shall be under the direction of the City Engineer. The representative on the work will inform the City Engineer as to the progress of the work, the manner in which it is being done, and the quality of the materials being used. The representative shall call to the attention of the Contractor any failure to follow the plans and specifications that they observe. The representative shall have the authority to reject materials or suspend the work whenever such stoppage may be necessary to ensure proper execution of the Contract and until any questions on the performance of the work can be referred to and decided by the Engineer. The representative shall have no authority to supervise the Contractor's operations or to change the Contract or specifications. The City Engineer shall also have authority to reject all work and materials which do not conform to the contract.

In no instance shall any action or omission on the part of the representative release the Contractor of the responsibility of completing the work in accordance with the plans and specifications.

Personnel employed by the Contractor shall in no way be deemed to be employees of the City and shall not be entitled to any fringe benefit the City affords its employees. Personnel employed by the Contractor shall not hold themselves out as employees of the City.

The Contractor must not construe approvals, reviews, or inspections by the Department or its officers, agents, and employees as a warranty or assumption of liability on the part of the Department. The Contractor understands and agrees that approvals, reviews, and inspections are for the sole and exclusive purposes of the Department, which is acting in a governmental capacity under the contract. Department approvals, reviews, and inspections do not relieve the Contractor of its contractual obligations. The Contractor understands that approvals, reviews, and inspections are undertaken for the sole use and information of the Department and will not act as a warranty as to the propriety of the Contractor's performance.

- A. **General Authority of the Engineer.** The Engineer will decide questions that arise concerning the interpretation of the contract and its acceptable fulfillment. The Engineer will also decide questions regarding the quality and acceptability of materials provided, work performed, manner of performance, and rate of progress of the work.

If either party discovers any errors, uncertainties, inconsistencies, omissions, or conflicts in the contract, the Engineer will clarify and determine the true intent of the contract.

- B. Authority of the Engineer to Suspend Work.** The Engineer may suspend the work, or a portion of the work, for the following reasons:

1. Failure by the Contractor to correct conditions that are unsafe for the workers or the public;
2. Unsuitable weather;
3. Conditions considered unfavorable for the prosecution of the work; or
4. Any other condition or reason deemed to be in the interest of the public.

Upon written notice of a suspension, the Contractor must put the work in a satisfactory condition and protect the work, as directed by the Engineer. The suspended work must not adversely affect the safety or mobility of the public. The Contractor must not resume the suspended work until directed, in writing, by the Engineer.

- C. Authority of the Engineer to Direct the Acceleration of the Work.** The Engineer may order the Contractor to accelerate the work or portions of the work to avoid user delay costs or to complete the project early.

- D. Authority and Duties of Inspectors.** The Department may appoint Inspectors to inspect the work and test materials. These duties may extend to all parts of the work and preparation or manufacture of materials for use in the work. The Department does not authorize an Inspector to revoke or change the contract. If a dispute arises between the Contractor and the Inspector regarding the materials provided or performance of the work, the Inspector may, by submitting written notice to the Contractor, reject materials or suspend the work until the Engineer makes a determination regarding the dispute. The Department considers work performed contrary to the Inspector's directions or work performed while suspended by the Inspector as unauthorized work. The Engineer may direct the Contractor to remove and replace unauthorized work at no additional cost to the Department in accordance with subsection 104.05. Actions or omissions of the Inspector will not relieve the Contractor of the responsibility of completing the work as required by the contract.

- E. Authority to Inspect.** The Contractor must provide the Department and its authorized representatives safe access to the work at all times. The Contractor must provide the Department and its authorized representatives with the information and assistance necessary for them to make complete and detailed inspections. The Department may also

perform inspections at mills, plants, laboratories, shops, or other locations outside the project limits. The Contractor is not entitled to a time extension or compensation for reasonable delays, inconvenience, or any other cause attributed to the Department's reasonable inspection of the work.

- F. **Authority to Inspect Scales.** The Contractor must enlist the services of a Michigan Registered Service Agency to certify the calibration and working order of the weighing system. The Department may inspect or verify scale systems, private scale inspectors, and inspection agencies. The Contractor must immediately correct any failure to meet the requirements of this subsection.

The Contractor must ensure at all times that scales are installed, maintained, and used in accordance with the Weights and Measures Act, MCL 290.601 et seq., and the requirements of the NIST Handbook 44, *Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices*.

The Contractor is responsible for all costs incurred for the inspection of scale systems, and no additional compensation will be allowed. The Contractor is not entitled to an extension of time or compensation for reasonable delays, inconvenience, or any other cause attributed to the Department's inspection of scale systems.

104.02. Plans and Working Drawings

The Department will provide plans showing details of the work required by the contract. If the plans omit dimensions necessary to complete the work, the Engineer will provide the Contractor with the omitted dimensions upon request. The Contractor is responsible for all dimensions he or she scales from the plans.

The Contractor must submit, for review, all working drawings not furnished by the Department for all parts of the work as required by the contract. The working drawings must call attention to deviations from the plans, specifications, and contract. If deviations have not been clearly identified, they will not be considered as part of the working drawing approval.

If the contract requires working drawings and design calculations that are not part of the finished structure, the Contractor must submit these working drawings and design calculations to the Engineer for Department review. If the contract does not require these working drawings and design calculations, but the Engineer directs the Contractor to submit them, the Department will pay for these working drawings and design calculations as extra work. The Contractor must ensure that a Professional Engineer, licensed in the State of Michigan, seals all working drawings and design calculations submitted. The Contractor is responsible for the correctness of

the working drawings and design calculations and ensuring that the design complies with any permit requirements.

The Contractor will submit a complete set of working drawings and design calculations, and the Department will have up to 14 calendar days to review for approval or provide comments for revisions required to obtain approval unless noted otherwise in the contract. Should approval not be granted per the first review, the Contractor is required to submit revised working drawings and design calculations, and the Department may require up to 7 calendar days for each additional review cycle. To ensure timely response and review time frames, the Contractor and Department will communicate directly to address and resolve all outstanding comments on all subsequent submittals. If, for reasons not attributed to the Contractor, additional time is required beyond 28 calendar days of Department review time to obtain approval for the working drawings, this additional time will be considered for an extension of time in accordance with the Contract. The Contractor is responsible for costs associated with obtaining approval of working drawings and design calculations.

The Department's review and approval does not relieve the Contractor of full responsibility for all negligence in the construction of the project resulting from the working drawings. The Department's review and approval of the working drawings and design calculations are not a warranty of the adequacy and correctness of the design.

The Contractor may arrange for the Department to communicate directly with the fabricator or supplier to review the working drawings for the following or similar items:

- A. Fabricated structural elements;
- B. Mechanical equipment;
- C. Electrical equipment and circuitry; and
- D. Water mains.

Prior to development of working drawings, the Contractor must check the dimensions and locations of the exposed features on existing structures to verify that its relationship to the proposed work is as shown on the plans. The Contractor must notify the Engineer of differences between the actual dimensions, elevations and locations of exposed existing features and those shown on the plans. The cost of verifying the dimensions, elevations and locations of exposed existing features is included in the contract unit price for mobilization in accordance with section 110.

After completing the work, the Contractor must provide the Department with one complete set of working drawings on a medium approved by the

Department. The Contractor must provide copies of catalogue cuts, parts lists, operating procedures, and instructions as deemed necessary for the project by the Engineer.

SHOP DRAWING SUBMITTALS

- A. Shop drawings consist of all drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for Contractor to illustrate some portion of the work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a manufacturer and submitted by Contractor to illustrate material or equipment for distinct portions of the work.
- B. Submittal of incomplete or unchecked shop drawings will not be acceptable. Shop drawing submittals which do not clearly show Contractor's review stamp or specific written indication of Contractor review will be returned to Contractor for resubmission.
- C. The Contractor shall submit to Engineer for review and approval PDF's via email of shop drawings and shall combine submittals specified in each specification section into a single PDF whenever possible. Submittals shall identify project, Contractor, Specification section number, pertinent drawing sheet and detail number(s), products, units and assemblies, and the system or equipment identification or tag number as shown. The Contractor shall apply Contractor's stamp and sign or initial certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with requirements of the Contract Documents.
- D. The Contractor shall revise and resubmit submittals as required and identify all changes made since the previous submittal. Submittals will be acted upon by the Engineer and transmitted to Contractor not later than ten (10) working days after receipt by Engineer. When shop drawings have been reviewed by Engineer, two copies will be returned to Contractor appropriately annotated.
 - 1. If major changes or corrections are necessary, the shop drawing may be rejected and one set will be returned to Contractor with such changes or corrections indicated.

2. The Contractor shall correct and resubmit the shop drawings in the same manner as specified for the original submittal.
- E. Where called for in the specifications and as determined necessary by Engineer to provide proper correlation with other work, complete interface information shall be submitted. This interface information shall be accurate and contain all information necessary to allow for manufacturing and construction of the interfacing or connecting work.

The following shall apply to use of references:

- A. Work specified by reference to the published standard or specification of a government agency, technical association, trade association, professional society or institute, testing agency, or other organization shall conform to or surpass the minimum standards of quality for materials and workmanship established by the designated standard or specification.
- B. Where so specified, products or workmanship shall also conform to the additional prescriptive or performance requirements included within the Contract Document to establish a higher or more stringent standard of quality than that required by the referenced standard.
- C. Where the specific date or issue of the standard is not included with the reference to the standard, the edition, including all amendments published and available on the first published date of the Invitation to Bid, shall apply.
- D. Where two or more standards are specified to establish quality, the product and workmanship shall conform to or surpass the requirements of both.
- E. In case of conflict between referenced standards, the more stringent shall apply.
- F. Where both a standard and a brand name are specified for a product on the Contract Document, the proprietary product named shall conform to or surpass the requirements of the specified reference standard. The listing of a trade name in a Contract Document shall not be construed as warranting that such product conforms to the respective reference standard.
- G. Copies of applicable referenced standards have not been bound in this Contract Document. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, the Contractor shall obtain a copy or copies directly from the publication

source and maintain it in an orderly manner at the jobsite where it is available to the Contractor's personnel, subcontractors, City personnel and the Engineer.

104.03. Deviations from the Plans

The Contractor must not deviate from the plans or from Department-approved working drawings and design calculations unless the deviation is approved by the Engineer in writing.

If the Engineer approves deviations from the plans or Department-approved working drawings, the Contractor must submit to the Engineer revised plans, working drawings, and design calculations sealed by a Professional Engineer, licensed in the State of Michigan, for review by the Department. The Contractor is responsible for the correctness of these revised plans, working drawings, and design calculations and for ensuring that the revised design complies with any permit requirements.

104.04. Conformity with the Contract

The Contractor must perform the work as required by the contract. The Engineer may reject work that does not meet the contract requirements. If the Engineer accepts work that does not meet the contract requirements, the Engineer will document the basis of acceptance by contract modification. The Engineer will determine whether a reduction in the contract unit price or a guaranty bond is appropriate and will properly document its determination.

The Contractor must remove and replace or correct rejected work as directed by the Engineer at no additional cost to the Department.

104.05. Removal of Unauthorized Work

If the Contractor performs unauthorized work (work performed without the inspections required by the contract, extra work performed without Department approval, work performed contrary to the Inspectors' direction, or work performed while under suspension by the Inspector), the Engineer may direct the Contractor to remove and replace the unauthorized work at no additional cost to the Department.

104.06. Coordination of Drawing Dimensions and the Contract

In case of a conflict in the contract, the following establishes the order of precedence:

- A. Project plans and approved working drawings;
- B. Special provisions;
- C. Supplemental specifications;

D. MDOT Standard Plans; and

E. *Standard Specifications*.

Plan dimensions take precedence over calculated dimensions or digital plans; calculated dimensions take precedence over scaled dimensions or digital plans.

The Contractor must not take advantage of errors or omissions in the contract and must immediately notify the Engineer when errors or omissions are discovered. If any errors, uncertainties, inconsistencies, omissions, or conflicts are discovered in the contract, the Engineer will determine the true intent of the contract.

104.07. Contractor Obligations

The Contractor must obtain and provide sufficient materials, equipment, tools, labor, and incidentals to complete the project as required by the contract. The Contractor, its suppliers, and its subcontractors must allow the Department access to relevant records, accounts, and other project-related documentation and to their facilities as necessary for the Department to determine compliance with the contract requirements.

The work under this contract shall be under the direct charge and direction of the Contractor. The Contractor shall give efficient superintendence to the work, using their best skill and attention. The Contractor shall at all times keep a competent superintendent and any and all necessary supervisors and assistants on the site of the work during its progress. The superintendent shall represent and have full authority to act for the Contractor in the Contractor's absence, and all directions given to the Superintendent shall be as binding as if given to the Contractor. The superintendent shall be authorized to receive and execute any and all orders, when given by the Engineer; and such order, when given out and received by the superintendent, shall be deemed to have been given to and received by the Contractor. Copies of the drawings and specifications shall at all times be kept on file by the Contractor at readily accessible points near the work.

The Contractor shall employ only competent, efficient workers and shall not use on the work any unfit person or one not skilled in the work assigned and Contractor shall at all times enforce strict discipline and good order among Contractor's employees.

Except for safety issues or as required by the contract, the Contractor must not suspend work unless approved by the Engineer in writing. The Contractor must notify the Engineer within 24 hours of suspending the work.

A. **Project Supervisor.** The Contractor must provide a Project Supervisor to manage the work. Before beginning the work, the Contractor must submit

to the Engineer the name of the Project Supervisor in writing. As the primary representative of the Contractor on the project, the Project Supervisor must be available at all times and must:

1. Have access to the contract at all times;
2. Ensure that each subcontractor has access to the contract covering the subcontractor's work at the project at all times;
3. Communicate in English;
4. Be capable of reading, interpreting, and implementing the contract;
5. Communicate with subcontractors in a manner that ensures that the Department's directions are carried out;
6. Be familiar with, and competent in, the management of projects involving the type of work being performed;
7. Act as agent for the Contractor and be responsible for subcontractors;
8. Anticipate construction impacts to property owners and businesses and work with these parties before the impacts occur to minimize conflict;
9. Handle delays or quality issues for the Contractor; and
10. Receive and implement the direction of the Engineer.

When the Contractor or its subcontractors are performing work, the Project Supervisor must be present at the project unless otherwise approved by the Engineer. When the Contractor and subcontractors are not performing work at the project, the Contractor must designate a Contractor representative to receive and execute directions from the Engineer at all times. The representative must be available at all times to receive and sign work orders.

- B. **Safety and Health Requirements.** The Contractor is responsible for protecting the life and health of all personnel on the project, the safety and health of the public, and property during the construction of the project.

The Contractor must comply with all local, state, and federal laws and regulations governing construction methods and the furnishing and use of safeguards, safety devices, protective equipment, and environmental and hazardous materials controls.

The Contractor must provide the following prior to the commencement of construction:

1. **Safety Supervisor.** The Contractor must appoint a Safety Supervisor, and an alternate, with the authority and responsibility to administer the

Construction Safety Program on the project. The Contractor must provide written notification to the Engineer of the names, addresses, and telephone numbers of the Safety Supervisor and the alternate.

2. **Construction Safety Program.** Before beginning work on the project, the Contractor must submit a written Construction Safety Program that outlines the plan and procedures for preventing and mitigating incidents and fires on the project and meeting all health and safety requirements of the contract. The Construction Safety Program must include provisions for meeting the requirements of subsection 812.03 and details for the materials and equipment that will be used to prevent construction-related debris or materials from entering the open lanes of traffic and the actions, including traffic control measures, that will be taken to immediately and safely remove the debris or material from the roadway. The Engineer may request a meeting with the Contractor to discuss the Construction Safety Program and to develop mutual understandings to govern the administration and enforcement of the program.
3. **Emergency Control.** The Contractor or alternate must remain on call for notification of emergencies that may arise during periods when construction operations are not in progress. The Contractor must be available to assist local emergency response efforts by addressing any contract work involved in, or affected by, the emergency as directed by the Engineer.

The Contractor must meet periodically with the Engineer as the work progresses to review the contract and the Construction Safety Program and to consider necessary changes to the program for traffic protection and incident prevention.

If the Contractor is not reasonably available to take protective or corrective action, the Department will authorize others to take the protective or corrective action. The Contractor will be responsible for the itemized cost associated with protective or corrective action required for traffic protection and incident prevention and completed by others at the Department's direction.

4. **High-Visibility Safety Apparel.** All workers must wear high-visibility safety apparel as specified in the MMUTCD.
5. **Safety and Protection**
 - A. After the Contract is awarded and before the commencement of work, the Contractor, jointly with the Engineer, shall make a thorough examination of all existing buildings, structures, and other improvements in the vicinity of the work, as applicable,

which might be damaged by construction operations. Duplicate Records of all observations shall be prepared by the Contractor and each copy of every document shall be signed by the Engineer and the Contractor. Photographs or videotapes shall be made by the Contractor and signed in the manner specified above. One signed copy of every document and photograph will be kept on file in the office of the Engineer.

B. These records and photographs are intended for use as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of the Contractor's operations, and are for the protection of the adjacent property owners, the Contractor and the City.

C. Contractor shall do whatever work is necessary for safety and shall be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to Federal and State Departments of the Occupational Safety and Health Act (OSHA) and other applicable federal, state, county and local laws, ordinances, codes and regulations. Where these are in conflict, the more stringent requirement shall be followed.

D. Contractor shall develop and maintain for the duration of the contract a safety program that will effectively incorporate and implement required safety provisions, and Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes in pedestrian sidewalks or walkways, and trenches or excavations in roadways. Barricades, fencing, steel plates, lanterns and proper signs shall be furnished sufficiently to safeguard the public and the work.

E. The Engineer's review of the Contractor's work including providing a Resident Project Representative is not intended to include a review or approval of the adequacy of Contractor's safety supervisor, safety program, or safety measures taken in, on or near the construction site.

F. If death or serious injuries or damages occur during the Contractor's execution of the work, the accident shall be reported to the Engineer in a timely manner. In addition, Contractor shall promptly report to the Engineer in writing all accidents whatsoever arising out of, or in connection with, the performance of the work whether on or

adjacent to the site, giving full details and statements of witnesses. If claim is made by anyone against Contractor or any subcontractor, Contractor shall promptly report the facts in writing, giving full details of the claim.

C. Maintenance During Construction

1. **Routine Maintenance by the Department.** Except as specified in subsection 104.07.C.2, the Department will assume routine maintenance of roads, bridges, and other facilities open to traffic or used by the public during periods of approved seasonal suspensions. The Department defines routine maintenance as the repair of damage to roads, bridges, and other facilities from normal wear and tear due to traffic and weather. Routine maintenance does not include damage resulting from the Contractor's vehicles or equipment. The Department will perform snow plowing and ice control work on roads and facilities open to traffic.

The Contractor is not entitled to compensation for delays, inconvenience, or any other cause attributed to the Department's performance of routine maintenance.

2. **Routine Maintenance by the Contractor.** If the Contractor maintains through-traffic on the project, the Contractor must perform necessary routine maintenance, as directed by the Engineer, on that portion of the roadbed surface on which construction operations have begun. The Contractor must perform routine maintenance outside the area of construction operations but within project limits only if directed to do so by the Engineer in writing. The Department will pay the Contractor for all routine maintenance directed by the Engineer as extra work.

The Contractor must perform routine maintenance on Contractor constructed temporary facilities not open to traffic or in use by the public (including during periods of approved seasonal suspensions) at no additional cost to the Department, unless otherwise required by the contract. The Contractor must provide access for local traffic to property along the project even during seasonal suspension at no additional cost to the Department unless otherwise provided for in the contract.

Sweep pavements in the construction area, including service roads and cross streets, as directed by the Engineer. Paved surfaces must be swept as often as necessary and as directed by the Engineer. Paved roadbeds must be given a final cleaning within 7 days prior to opening the pavement surface to traffic or notification by the Contractor that the work is completed, whichever occurs first. The

work of sweeping will not be paid for separately, but payment will be considered as having been included in other contract items.

3. **Damage Repair by the Contractor.** Except as specified in subsection 107.11, the Contractor must repair damage to highway facilities caused by defective materials, faulty workmanship, Contractor operations, and work not protected properly from naturally occurring events at no additional cost to the Department. The Contractor is responsible, at no additional cost to the Department, to provide the necessary materials and equipment to prevent construction-related debris or materials from entering the open lanes of traffic. This includes protecting traffic controls, removing spilled materials or debris from the roadbed or drainage courses, and repairing damaged facilities necessary for public travel and safety.

The Contractor must provide, install, and operate traffic control devices required to warn traffic of and protect traffic from Contractor-damaged facilities and repair operations at no additional cost to the Department. If the Department determines that the Contractor is not reasonably available to take protective or corrective actions, the Department will authorize others to complete the protective or corrective actions. The itemized cost associated with protective or corrective action that is required due to Contractor-damaged facilities and repair operations and completed by others at the Department's direction will be the responsibility of the Contractor.

- D. **Final Cleanup.** Unless otherwise required by the contract, the cost of final cleanup is included in the contract unit price for other pay items.

At completion of work and immediately prior to final inspection, the Contractor shall clean the entire project and leave the structures and site in a complete and finished condition. Before final acceptance by the Engineer, the Contractor must complete all of the following at a minimum:

1. Remove the following from the project limits, unless otherwise required by the contract or directed by the Engineer:
 - a. Falsework;
 - b. Unused materials;
 - c. Temporary erosion control devices;
 - d. Rubbish;
 - e. Temporary bridges, approaches, and buildings;
 - f. Equipment; and

- g. Temporary traffic control devices.
- 2. Restore areas occupied during the project to a condition at least equal to the condition existing before the Contractor began performing work, as determined by the Engineer.
- 3. Restore property that was used or damaged during the performance of the work, including property outside the project limits.
- 4. Provide the Department with written notification that all property that was used or damaged during performance of the work, including property outside the project limits, has been restored in accordance with applicable local, state, and federal requirements.
- 5. Clean paved roadbeds and sidewalks within 7 days before opening the pavement surface to traffic. Take precautions so as not to produce airborne dust when cleaning roadbeds in residential and urban areas.
- 6. The Contractor shall remove grease, dust, dirt, stains and other foreign materials from exposed interior and exterior finished surfaces. The Contractor shall repair, patch and touch up marred surfaces and match adjacent surfaces. The Contractor shall broom clean paved surfaces, rake clean other surfaces and remove from the City's property temporary structures and materials, equipment and appurtenances not required as part of or appurtenant to the completed work.

104.08. Cooperation by the Contractor

The Contractor must conduct operations to cooperate with and interfere as little as possible with activities of other contractors, the Department, utilities, or public authorities on or near the project or as directed by the Engineer. The Department may perform other work and allow public utility companies and others to do work on or near the project. The Contractor is not entitled to compensation or extension of time for delays or costs incurred as a result of complying with this requirement, except as allowed in the contract.

If a dispute arises between two or more contractors or others as to the respective rights of each under these specifications, the Engineer will determine the matters at issue and will define the respective rights of the various interests involved in order to secure the completion of all parts of the work in general harmony and with satisfactory results. The Engineer's decision will be final and binding on all parties concerned. The Contractor, or any other party, is not entitled to an extension of time or compensation for delays, inconvenience, or any other cause attributed to the Engineer's decision, except as allowed in the contract.

104.09. Lines, Grades, and Elevations

The Engineer shall furnish the Contractor with one set of lines, grades and measurements considered by the Engineer as necessary for the proper prosecution and control of the work contracted for under these plans and specifications.

Unless specified in the contract to be completed by others, the Contractor must provide, place, protect, and maintain staking necessary for proper prosecution, inspection, and final measurements of the work in accordance with section 824 and the contract. The Contractor must determine and lay out detail dimensions and elevations. Unless specified in the contract to be completed by others, the Contractor shall furnish staking required by their forces to accomplish the work. The Contractor shall also confirm to the accuracy of all measurements prior to constructing any work on the basis of these measurements. The Contractor shall take due and proper precautions for the preservation of all stakes and marks set by the Engineer. In the case of negligence on the part of the Contractor or Contractor's employees resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due to the Contractor at the discretion of the City Engineer.

The Engineer may check to determine whether the Contractor's work meets the contract requirements in accordance with subsection 104.01.

104.10. Reserved

104.11. Work Zone Safety and Mobility

- A. **General Traffic Control.** The Contractor must not close sidewalks, trails, streets, bridges, or sections of, to non-motorized and motorized traffic (traffic) unless required by the contract or directed by the Engineer.

The plan for traffic control for the contract shall be as directed or approved by the City of Traverse City.

The Contractor shall maintain access for traffic for local residences, commercial establishments and deliveries, and for emergency vehicles at all times unless otherwise specified in the contract documents or as approved by the City Engineer.

The Contractor shall conduct its operations in a manner that will not interrupt traffic except as approved by the City Engineer. The work area shall be confined to the smallest area possible to allow maximum use of the street or non-motorized facility and to reduce any hazard to traffic.

At all times, the Contractor shall use workers and traffic control signs and devices necessary to comply with the contract document, specifications, Section 812 of the Standard Specifications, and the *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*.

B. Reserved.

104.12. Approval for the Use of the Right-of-Way

The proposed right-of-way use must be directly related to the operations of the project under contract. The Contractor may use Department-owned right-of-way to perform the work if prior written approval is given by the Engineer. Additional restrictions regarding the use of right-of-way may exist in the contract. The use of right-of-way in wetlands and floodplains or the crossing of water courses by construction equipment is prohibited.

To use Department right-of-way, the Contractor must submit to the Engineer a written request including a Right-of-Way Use Plan. The Contractor must include the following in the plan:

- A. Site location and layout;
- B. General intended use;
- C. Site access plan;
- D. Any access through right-of-way fencing or boundaries;
- E. Identification of materials and method of storage as applicable;
- F. Soil erosion and sedimentation control plan;
- G. Site restoration requirements;
- H. Drainage and environmental protection plan;
- I. Acquisition of necessary permits; and
- J. Commitment to follow all local laws and ordinances.

The Engineer may direct the Contractor to include additional information in the plan.

The Department will review the written request and provide a written response to the request indicating approval, approval with conditions or modifications, or denial with reason.

Section 105. Control of Materials

105.01. Quality and Source of Supply

Unless otherwise required by the contract, the Contractor must:

- A. Provide new materials and fabricated items that meet the requirements of the specifications or approved by the Engineer in writing before use in the work.
- B. Not used.
- C. Notify the Engineer in writing at least 7 days prior to materials being delivered to the site and materials being ready for sampling, testing, or inspection by the Department.
- D. Provide the Department with a reasonable time to perform the required sampling, testing, or inspection if the source of supply is changed.
- E. Provide the required documentation and obtain written approval from the Engineer before transferring materials that the Department has accepted for use on another Department contract.
- F. Regardless of the application, prohibit the use of the industrial byproducts covered in Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act (MCL 324.11501 et seq.).

If the Department determines that a source of supply does not provide an acceptable product as required by the contract, the Engineer may require the Contractor to provide acceptable material from other sources. The Contractor is not entitled to an extension of time or compensation for delays, inconvenience, or any other cause attributed to the Contractor providing acceptable material from other sources.

105.02. Natural Material Sources Found within the Excavation Limits

The Contractor may use natural material found within the excavation limits if the material meets the contract requirements of the work for which it is used, as determined by the Engineer. The Department will pay the Contractor for excavating this material at the corresponding contract unit price and for the pay item for which the excavated material is used.

105.03. Reserved**105.04. Miscellaneous Quantities**

If it is not possible to determine the locations and quantities of a pay item until after construction has begun, the plans will reflect a miscellaneous quantity. If the pay item with the miscellaneous quantity involves the purchase of materials, the Contractor must not order those materials until the Engineer has determined the actual quantity. Quantities may be adjusted by the Engineer as the work progresses.

105.05. Approval of Materials Incorporated into the Work

The Engineer may inspect materials that the Contractor will incorporate into the work at any time and at any place during the preparation, storage, and use of the materials. The Engineer will perform inspections of the materials, including sampling and testing, to determine whether the material meets the contract requirements.

If the Engineer inspects the materials at the plant, the Contractor must ensure that the producer, supplier, or manufacturer provides and maintains accommodations for the exclusive use of the Engineer in performing tests.

- A. Approval by Certification or Qualified Products List.** A materials certification or inclusion on the Qualified Products List is not to be construed as Department acceptance, warranty, or guarantee that the material provided by the Contractor meets the requirements of the contract. If the Contractor chooses to obtain materials under certification or from the Qualified Products List, the Contractor must ensure the supplier provides materials that meet the contract requirements.

If the Department approves the use of certified materials or materials from the Qualified Products List, the Contractor is responsible for removing and replacing nonconforming materials, even after final acceptance, unless the Contractor can prove all of the following:

1. The Contractor provided the notice required by subsection 105.01.C.
2. The Contractor provided the Department a reasonable time to sample, test, or inspect the material prior to incorporation into the work.
3. The Contractor did not know, and had no reason to know through reasonable inquiry, that substandard materials had been supplied.
4. The materials provided matched the material described in the certification statement or Qualified Products List.
5. The material described in the certification statement or Qualified Products List conform to the requirements in the specification.

The Contractor must notify the Engineer if the Contractor has, or by reasonable inquiry should have, reason to believe that a material supplier, producer, or manufacturer's circumstances have changed so that the quality of the materials certified for use on the project or materials on the Qualified Products List might not meet the contract requirements.

B. Approval by Test

1. The Contractor must provide such facilities as may be required by the contract for the Engineer to collect samples of materials and forward the samples to the testing laboratory. The materials represented by the samples being tested are not to be used until the Engineer determines that the materials meet the contract requirements. The Contractor must provide required samples to the Engineer at no additional cost to the Department. The Contractor must prepay transportation charges for shipment of samples to the testing laboratory designated by the Department. The Department will test these samples at its own expense.

2. Where required in the specifications and as determined necessary by Engineer, the Contractor shall submit test specimens or samples of materials, appliances and fittings to be used or offered for use in connection with the work. The Contractor shall submit samples and test specimens in ample time to enable Engineer to make tests or examinations necessary, without delay to the work.

3. Tests required by the specifications to be performed by an independent laboratory shall be made by a laboratory licensed or certified in accordance with State laws. Samples and laboratory services shall be at the expense of Contractor and included in the prices bid for the associated work.

4. Approved sample items (fixtures, hardware, etc.) may be incorporated into the work upon approval and when no longer needed by Engineer for reference.

C. Quality Control Submittals

1. Where manufacturer's certification is required in the specifications, the manufacturer shall provide certification stating the product or system has been installed in accordance with the manufacturer's recommendations, the product or system has been inspected by a manufacturer's authorized representative, and proper adjustments have been made and the product or system is ready for functional testing, plant startup and operation.

2. Where specified, furnish certification of compliance for products specified to a recognized standard or code prior to the use of such products in the work. Products used on the basis of a certification of compliance may be sampled and tested at any time. The fact that a product is used on the basis of a certification of compliance shall not relieve Contractor of responsibility for incorporating products in the work which conform to requirements of the Contract Documents. Products not conforming to such requirements will be subject to rejection where in place or not.

3. Where a certification of functional testing is specified for certain equipment, Contractor (as applicable to the equipment furnished) shall state in writing that necessary piping systems and valves have been successfully tested, necessary equipment systems and subsystems have been checked for proper installation, started and successfully tested to indicate they are operational, adjustments and calibrations have been made, and the facilities are ready for performance testing or for start-up and intended operation, as applicable.

105.06. Storage of Materials

The Department may designate portions of the right-of-way or other Department property on the plans as possible locations for storing materials in accordance with subsection 104.12. The Contractor must restore locations used for storage to pre-existing condition and in accordance with section 205.

The Contractor must store materials as follows:

- A. In a manner that will preserve the quality of the materials and prevent damage to existing woody vegetation not identified for removal;
- B. Protect items susceptible to damage;
- C. In a location that does not prohibit or delay the Engineer's inspections; and
- D. On private property only if approved by the owner and lessee in writing. If storing materials on private property, the Contractor must provide a copy of the written permission to the Engineer.

Additionally, the Contractor shall:

- A. Construct temporary storage yards for the storage of products that are not subject to damage by weather conditions.
- B. Erect or provide temporary storage buildings as needed to protect mechanical and electrical equipment and other

materials, as recommended by manufacturers of such equipment and materials.

- C. Store combustible materials (paints, solvents, fuels, etc.) in a well-ventilated building remote from other buildings.
- D. Provide barricades as necessary to prevent unauthorized entry to construction areas, both inside and outside of the fenced area. Also provide barricades to protect existing facilities and adjacent properties from potential damage. Locate barriers to enable access by facility operators and property owners.
- E. Not store materials on or under bridges.

If the Engineer approved materials before the Contractor stored them, the Engineer may inspect the materials again before the Contractor incorporates them into the work.

105.07. Handling and Transporting Materials

The Contractor must handle materials in a manner that will preserve the quality of the materials.

The Contractor must transport materials using vehicles constructed and maintained to prevent loss or segregation of materials.

105.08. Nonconforming Materials

- A. **Nonconforming Materials Identified before Incorporation into the Work.** The Engineer will take one of the following actions for nonconforming materials identified before incorporation into the work:
 - 1. The Engineer will reject the nonconforming materials and direct the Contractor to correct the rejected materials or remove the rejected materials from the project and replace with materials that meet the contract requirements. The Contractor must correct or remove and replace the rejected materials at no additional cost to the Department. Before incorporating corrected materials into the work, the Contractor must obtain the Engineer's approval.
 - 2. The Engineer will allow the nonconforming materials to be incorporated into the work and will make a reduction in the contract unit price for the relevant pay item or accept a guaranty bond in accordance with subsection 104.04.
- B. **Nonconforming Materials Identified after Incorporation into the Work.** The Engineer will take one of the following actions for nonconforming materials identified after incorporation into the work:

1. The Engineer will reject the nonconforming materials in accordance with subsection 104.04.
2. The Engineer will allow the nonconforming materials to remain in place and will make a reduction in the contract unit price for the relevant pay item or accept a guaranty bond in accordance with subsection 104.04.

105.09. Materials Not Incorporated into the Work

Before the Engineer will grant final acceptance, the Contractor must remove materials not incorporated into the work from the project in accordance with subsection 205.03.P, except for materials produced specifically for the project.

The Department may purchase the materials produced specifically for the project but not incorporated into the work. If the Department decides to purchase these materials, the Department will purchase only the surplus quantity of these materials not incorporated into the work. The surplus quantity is the difference between the quantity of the material shown on the plans and the actual quantity of materials incorporated into the work. The Department will pay the Contractor only for the cost to produce, deliver, and handle these materials in accordance with subsection 109.05.C, excluding overhead and profit. Any specifically produced material not purchased by the Department will remain the Contractor's and must be removed from the project prior to final acceptance.

105.10. Source of Steel and Iron

This section is only applicable if specified in the contract documents.

The Contractor must provide steel and iron materials for permanent incorporation into the work that were produced only in the United States. FHWA may grant a waiver for steel and iron materials if they are not produced in the United States in sufficient and reasonably available quantities and of satisfactory quality. Steel and iron materials include steel, steel products, and products that include steel components.

The Contractor must ensure that the manufacturing processes, including the application of coatings, for these materials and products occur in the United States. The application of coatings includes processes that protect or enhance the value of the material to which the coating is applied.

The Contractor may provide a minimal amount of foreign steel materials on the project if the total invoice cost of the foreign steel materials permanently incorporated in the project does not exceed 0.1% of the original contract amount or \$2,500.00, whichever is greater. The Department defines the total

invoice cost as the total value of the foreign steel materials delivered to the project.

The Contractor must submit written certification of compliance with the requirements of this subsection to the Engineer.

Section 106. Reserved

Section 107. Legal Relations and Responsibilities to the Public

107.01. Laws to Be Observed

The Contractor must be familiar with all state and federal laws, rules, executive orders, regulations, agricultural quarantines, local ordinances, and State Administrative Board resolutions that are current at the date of the advertisement and that supplement the contract or affect the equipment and materials used in the proposed construction, those employed on the work, and the conduct of the work. The Contractor must hold harmless and indemnify the Department and its representatives against any claim arising from any violation.

It is the Contractor's responsibility to determine what the laws require and then, at the sole expense of the Contractor, to perform the work required by the contract in whatever manner may be necessary to comply with all applicable laws. The Contractor is liable to the Department for fines, assessments, remediation, or environmental response costs incurred by the Department because of the Contractor's failure to comply with federal, state, and local laws.

The Engineer has the authority to shut down affected operations if the Contractor does not comply with the applicable laws. The Engineer also has the authority to direct the Contractor to implement immediate remedial action to bring the affected operations into compliance. The Contractor is not entitled to an extension of time or compensation for delays, inconvenience, or any other cause attributed to the Engineer's suspension of the work or directing remedial actions to bring the affected operations into compliance with the applicable laws.

The parties agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of their actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity. Breach of this covenant may be regarded as a material breach of this Agreement. Pursuant to the Persons with Disabilities Civil Rights Act (MCL 37.1101 et seq.), the Contractor agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment because of a disability unrelated to the individual's ability to perform the duties of a particular job or position.

Pursuant to the requirements and procedures of the Davis-Bacon and Related Acts in 29 CFR Parts 1, 3, and 5, and Michigan law, if specified in the contract documents, the Contractor must comply with all labor compliance provisions in the contract and as specified in the current written Department procedures for prevailing wage compliance oversight.

107.02. Permits and Licenses

The Contractor shall obtain all permits, including any necessary construction permits required of contractors for work within public streets, highways, roads or alleys. Contractor shall pay for same at Contractor's own expense as well as for any inspection fees that may be required in connection with such permits and shall conduct construction operations in accordance with provisions of such permits including tunneling of pavement where reburied. Contractor shall also furnish any required bonds and pay the cost of same.

- A. **Reimbursement of Fees.** The Department will not reimburse the Contractor for permit fees.
- B. **Permits.** The Contractor must follow the requirements outlined in the permits issued to the Department. If the proposed work or work methods necessitate a change to previously issued permits, the Contractor must provide a written request to the Engineer detailing the proposed changes. This requirement includes, but is not limited to, the following permits:
 - 1. Natural Resources and Environmental Protection Act (MCL 324.101 et seq.):
 - a. Part 31, Water Resources Protection (Floodplains);
 - b. Part 31, National Pollutant Discharge Elimination System (NPDES);
 - c. Part 301, Inland Lakes and Streams; and
 - d. Part 303, Wetlands Protection.
 - 2. U.S. Army Corps of Engineers Section 404, Dredge and Fill, and Section 10, Navigable Waterway.
 - 3. U.S. Coast Guard Section 9, Navigable Waterway.
 - 4. Federal Aviation Administration (FAA) permits.
 - 5. Part 91, Soil Erosion and Sediment Control

The Contractor must not proceed with the change until the Department provides written approval. The Department's approval of the change will require internal coordination, and the Contractor should therefore anticipate some delay. If the Department determines that the requested change is detrimental to the environment, the Department will not submit

a permit revision request to the permitting agency. The Contractor is not entitled to an extension of time or compensation for delays, inconvenience, or any other cause attributed to obtaining, or the inability to obtain, the permit changes unless the need for the permit change was the result of a contract revision in accordance with subsection 103.02.

107.03. Patented Processes and Materials

The Contractor must defend all patent infringement suits resulting from the use of designs, devices, material, or processes employed to construct the work as required by the contract. The Contractor must hold harmless and indemnify the Department and its representatives against suits or claims for royalties, damages, and costs.

The Contractor is responsible for submitting to the Engineer a written statement from the patentee or licensee for plans not supplied by the Department that embodies the use of any patented process, device, or design. The statement must set forth the exact terms under which the plans are to be used and the fixed price for which the Contractor may use the plans, processes, devices, or designs without further liability.

107.04. Federal Aid Participation

If any federal laws, rules, or regulations conflict with any provisions of a federally assisted contract, the federal requirements will prevail, take precedence, and be in force over and against such provisions.

If the cost of the contract work includes federal participation, the work will be under the supervision of the Department but will be subject to the inspection and approval of the proper officials of the United States Government. Inspections made by authorized federal representatives will not make the United States Government a party to the contract and will not interfere with the rights of the contract parties.

The making or use of false statements by the Contractor relating to documentation is a felony punishable by a fine of no more than \$10,000, imprisonment for no more than 5 years, or both. Making or using false claims for obtaining payment against federal funds subjects violators to forfeiture of \$10,000 for each violation in accordance with the anti-fraud statute originating from the Federal-Aid Road Act of 1916.

107.05. Sanitary Provisions

The Contractor must provide and maintain, in a neat and sanitary condition, facilities for the Contractor's employees to comply with the requirements and regulations of the federal, state, and local health authorities and must take precautions to avoid creating unsanitary conditions. All sanitary facilities shall

be subject to the approval of the State Health Department. The cost of providing this function shall be incidental to the job and borne by Contractor.

The Contractor must remove temporary sanitary facilities from the project limits before final acceptance. The Contractor must construct, maintain, and remove temporary sanitary facilities at no additional cost to the Department.

107.06. Furnishing Right-of-Way

The Department will be responsible for the following:

- A. Securing right-of-way necessary for the project before construction; and
- B. Identifying in the contract any right-of-way that the Department has not secured.

Unless specified in the contract documents, the contractor will be responsible for identifying staging areas, and obtaining permission if needed from respective property owners.

107.07. Protection and Restoration of Property

The Contractor must restore, at no additional cost to the Department, public and private property damaged because of acts or omissions by the Contractor and the employees and agents of the Contractor to a condition equal to that existing before the damage occurred. If the Contractor neglects to make restoration within 7 days of receiving written notice from the Engineer, or as otherwise required by applicable laws or regulations, the Engineer may proceed to make the restoration. The Engineer will deduct the cost of the restoration from monies that are or may become due the Contractor.

The Contractor shall continuously maintain adequate protection of all Contractor's work from damage and shall protect all public property and private abutting property from injury or loss arising in connection with this damage, injury or loss, and shall defend and save the City of Traverse City harmless from all such damages or injuries occurring because of Contractor's work. Contractor shall furnish and maintain all passageways, barricades, guard fences, lights and danger signals, provide watchmen and other facilities for protection required by public authority or local conditions, all at no additional cost to the City.

The Contractor shall assume full responsibility of loss or damage to the work during the entire construction period resulting from conditions, and from all other causes whatsoever not directly due to the acts or neglect of the City, including fire, vandalism and malicious mischief, and shall turn the finished

work over to the City in good condition and repair at the time of the final estimate.

The Contractor shall take all due precautions to protect any and all existing trees, plants, shrubs and foliage located in the project limits. Any tree, shrub, plant or foliage maliciously or carelessly destroyed shall be replaced with a plant of equal value at the Contractor's expense. The Contractor shall notify the City Engineer in advance regarding any tree, shrub or foliage that Contractor deems disruptive to his or her operations. The City Engineer may then make judgment as to the Contractor's request for tree or shrub removal and authorize removal of such tree or shrub.

The Contractor shall not work, store, or operate equipment outside designated work areas as shown on plans without permission of the City Engineer.

The Contractor shall conduct operations so as not to interfere with or injure the work of other contractors or adjacent force account work, and shall promptly make good any injury or damage which may be done to such work by Contractor or Contractor's employees or agents.

107.08. Land Monuments and Property Corners

The Contractor must locate and preserve existing public land survey monuments and corners, property-controlling corners, and alignment control points as shown on the plans or as directed by the Engineer. The Contractor must provide a professional surveyor, licensed in the State of Michigan, to perform work necessary to maintain the corners. Where monuments or irons are disturbed or removed due to operations under this contract, the Contractor, at Contractor's own expense, shall employ the services of a registered land surveyor licensed in the State of Michigan to establish, reset or replace such monuments or irons. This work must be completed and will be paid for in accordance with section 821.

107.09. Archaeological and Historical Findings

If the Contractor finds what appear to be items of potentially archaeological or historical significance (such as bones, artifacts, or buried foundations), the Contractor must immediately stop operations in that location and notify the Engineer. The Engineer will investigate and contact the appropriate agency for consultation and direction. If bones are discovered and there is no reasonable doubt that they are human bones, the Engineer will immediately call the respective local law enforcement agency according to Michigan law. The Engineer, in consultation with the Department Archaeologist, will direct the Contractor to resume operations or continue the suspension of operations in accordance with subsection 104.01.B.

The Contractor must cooperate in the recovery of archeological and historical items, as directed by the Engineer. The Department will pay the Contractor and grant an extension of time for any delay related to the recovery of archeological and historical items as extra work in accordance with subsection 103.02.

107.10. Indemnification, Damage Liability, and Insurance

A. Indemnification

Contractor shall indemnify and save harmless the City, its officers, agents and employees from and against any and all claims, liabilities, losses, damages, actual attorney fees and settlement expenses arising from bodily injury or death of any persons and damage or loss of any property resulting or arising out of or in connection with the performance of any work relating to this Contract based upon any act, omission, or negligence of Contractor or its employees, agents, servants, subcontractors, or any other person or persons, including but not limited to the City, its agents, officers, or employees. The obligations to indemnify, and hold harmless contained herein shall exclude only those matters in which the claim arises out of allegations of the sole negligence of the City, its officers, agents or employees. This indemnification provision shall not be limited by reason of insurance coverage of any type. This provision is not intended to waive the defense of governmental immunity that may be asserted by the City in an action against it.

The City of Traverse City hereby reserves the right to select its own counsel in defense of any matter arising hereunder, and no payment, or acknowledgement of liability, loss, fine, penalty or charge shall be made against the City of Traverse City without its express written consent.

This indemnity shall survive the expiration or termination of this Contract.

The Contractor expressly acknowledges and agrees that this indemnification provision is intended to be as broad and inclusive as is permitted by law and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect.

B. Insurance

The Contractor agrees not to change and agrees to maintain the following insurance throughout the period of performance of this Agreement. The Contractor will upon execution of this Agreement provide a certificate of insurance to the City Clerk. Upon request by the City Clerk, Contractor shall provide a full copy of any insurance policy for insurance coverage required under this agreement within ten (10) days of request. This time frame may be extended by the City Clerk in cases where the policy has not been issued. The policy shall contain endorsements stating that at least a 10-day notice will be given to the City prior to termination or any change in the policy; and for

insurance coverage where Contractor shall name the City as additional insured, Contractor shall provide an endorsement stating that the City has been named as an additional insured onto such policy for all claims arising out of the Contractor work. Should any required insurance be cancelled, materially reduced or expired, all activities under this Agreement shall immediately cease until substitute insurance in compliance with all requirements hereof has been procured and evidence thereof presented to the City

1. Contractor's General Liability and Property Damage Insurance

The Contractor shall procure and shall maintain during the life of this Contract Contractor's General Liability Insurance in an amount not less than \$1,000,000 for injuries, including accidental death, for each person; and subject to the same limit for each person, in an amount not less than \$1,000,000 on account of each accident; and Contractor's Property Damage Insurance in an amount not less than \$1,000,000 each occurrence; and combined Single Limit for Bodily Injury and Property Damage Liability in an amount not less than \$2,000,000 for each occurrence, including property damage coverage for the following terms:

- A. Underground Damage** to facilities due to drilling and excavating with mechanical equipment in streets and highways, easements or public property.
- B. Collapse or Structural Injury** to structures due to blasting or explosion, excavation, tunneling, pile driving or cofferdam work.

The Comprehensive General Liability insurance shall include coverage for the contractual obligation assumed in paragraph eleven (11) of the contract and products and completed operations coverage through the maintenance and guarantee period set forth in paragraph seven (7).

For contracts in excess of TWO HUNDRED FIFTY THOUSAND DOLLARS (\$250,000), the Contractor shall provide ISO general aggregate endorsement CG 25 03 which provides a project specific aggregate of \$2 million for general liability.

C. Worker's Compensation

The Contractor shall comply with the requirements of the Michigan Worker's Compensation Law and shall maintain such insurance as will protect them from claims under said law, and from any other claim for personal injury, including death, which may arise from operations by

themselves or by any other Contractor, or anyone directly or indirectly employed by either of them, and will give proof of such insurance to the City Engineer at the time of filing its bonds and Contract.

D. Owner's (City's) Protective Liability.

The Contractor shall procure and maintain an Owner's Protective Liability Policy in an amount not less than \$2,000,000 with respect to any one person, and \$2,000,000 with respect to any occurrence in the case of bodily injury, and \$1,000,000 for each occurrence and a \$1,000,000 aggregate for property damage liability; and combined single limit for Bodily Injury and Property Damage in an amount not less than \$2,000,000 for each occurrence and shall obtain an endorsement to the policy which names the City as additional insured.

E. Cancellation

If any of the insurance is canceled, the Contractor and all subcontractors shall cease operations, and shall not resume until new insurance is obtained, and evidence of same be accepted by the City of Traverse City.

F. Notice

The Contractor must ensure that all insurance policies and binders include an endorsement in which the insurer agrees to notify the Department in writing at least 30 days before there is a cancellation or material change in coverage. The Contractor and all subcontractors must stop operations if any insurance is canceled or reduced below the specified limits and must not resume operations until new insurance is in force, and evidence of same be accepted by the City of Travers City.

G. Damage Claims

The Contractor is responsible for acting on damage claims that occur from execution of the contract until the Contractor achieves satisfactory final inspection in accordance with subsection 109.07.C. The Contractor may act directly with the claimant or through the claimant's insurance carrier.

1. Damage Claim Program. Before beginning construction on the project, the Contractor must submit a written damage claim program plan for approval by the Engineer. The plan must outline the Contractor's plan for the investigation and disposition of damage claims. The Contractor must meet with the Engineer to discuss the damage claim program and

develop a mutual understanding of how the Contractor will govern, administer, and enforce the program.

2. Damage Claim Officer. The Contractor must provide written notification to the Engineer of the name and contact information for the Contractor's Damage Claim Officer. The Damage Claim Officer is the person with the authority and responsibility to administer the Contractor's damage claim program.

3. Damage Claim Process. The Engineer will submit damage claim forms received by the Department to the Contractor within 14 days from the first contact with the claimant. The Contractor must act on damage claims within the time frames specified in this subsection and must submit to the Engineer a report on damage claims received that includes information as specified in subsection 107.10.G.5.

- a. **Claims Less Than or Equal to \$1,500.** The Contractor must reach final disposition and notify the claimant in writing within 60 calendar days of receipt of the damage claim form from the Engineer. If the Contractor fails to reach final disposition and notify the claimant within 60 calendar days, the Engineer will enforce subsection 107.07. In this circumstance, the Department defines restoration as payment to the claimant for alleged damages as documented on the original damage claim form. If payment is made based on failure to meet the time requirement, the claimant must sign a waiver indicating that payment was made because of a failure to meet the time requirement not because of the merit of the damage claim. Before the 60 calendar days expires, the Contractor may request an extension of no more than 30 calendar days for documented circumstances beyond the Contractor's control. The Contractor must make this request in writing to the Engineer.
- b. **Claims Greater Than \$1,500.** The Contractor must reach final disposition and notify the claimant in writing within 120 calendar days of receipt of the damage claim form from the Engineer. If the 120 calendar days expire prior to final acceptance of the project, the Engineer will withhold the amount of the damage claim from payments to the Contractor until the Contractor reaches final disposition and notifies the claimant.

4. **Final Disposition.** The Department will withhold from the final estimate or monies due or to become due the Contractor an amount not exceeding the aggregate amount of all outstanding and unresolved damage claims until final disposition of all damage claims. Final disposition for damage claims of \$1,500 or less must include payment, settlement, or denial of the damage claim by the Contractor's insurer or the Contractor. Final disposition for damage claims over \$1,500 must include payment, settlement, or denial of the damage claim by the Contractor's insurer or settlement or payment by the Contractor.
5. **Documentation Requirements.** The Contractor must use the Department's standard forms for processing damage claims, unless otherwise approved by the Engineer. The Contractor must submit to the Engineer a report upon final disposition of each damage claim. The report must include the following information:
 - a. Location of the incident;
 - b. Specific work activities during the day and time of damage claim;
 - c. Detailed weather and road conditions;
 - d. Traffic movements, signing, and equipment in use;
 - e. Any unusual occurrences;
 - f. Measurements taken at the time or location of the incident;
 - g. Records of all contact with Engineer or claimant to discuss disposition;
 - h. Other documentation pertinent to the damage claim; and
 - i. Report of final disposition of damage claim.

107.11. Contractor's Responsibility for the Work

Until the Contractor achieves satisfactory final inspection in accordance with subsection 109.07.C, the Contractor is responsible for the work and must take every precaution against injury to the public or otherwise and damage to public or private property due to the elements or other causes. The Contractor is responsible for any expense resulting from and of the aforementioned injuries or damages. The Contractor must rebuild, repair, restore, and make good any injury or damage to the work before the Contractor achieves satisfactory final inspection in accordance with subsection 109.07.C and at no additional cost to the Department except for injury or damage that is beyond the Contractor's control and not the fault of the Contractor including, but not limited to, the following:

- A. Acts of God or of the public enemy;

- B. Acts of the government;
- C. Geohazards found by the Engineer to have been unavoidable;
- D. Ordinary wear and tear on sections of the road opened to traffic as required by the contract or ordered by the Engineer; and
- E. Maintenance and third-party damage responsibility for portions of the work that have been granted partial acceptance, or designated for delayed acceptance, by the Department in accordance with subsection 109.07.

The Contractor must obtain approval from the Engineer for the use of drainage facilities (existing or proposed according to the contract) belonging to the Department or another state or local government agency. The Engineer and the Contractor must determine the condition of the facilities and make arrangements to allow use. Before the Contractor achieves satisfactory final inspection in accordance with subsection 109.07.C, the Contractor must restore drainage facilities used or affected by the Contractor's operations to a condition that is equal to or better than the condition of the facilities before the Contractor's use. Drainage facilities include catch basins, manholes, inlets, sumps, sewers, lift stations, outlets, open drainage systems, and water quality treatment systems.

In case of suspension of work, the Contractor is responsible for the proper storage of materials and providing suitable drainage of the project.

107.12. Contractor's Responsibility for Utility Property and Services

The Contractor must comply with the MISS DIG Underground Facility Damage Prevention and Safety Act (MCL 460.721 et seq.). Compliance does not relieve the Contractor of the responsibility to notify utility owners identified in the contract that are not part of MISS DIG Systems, Inc.

MDOT's lighting system, Intelligent Transportation Systems (ITS), and miscellaneous electrical systems are not part of MISS DIG Systems, Inc. The Contractor must contact the maintenance representative at the MDOT Region Office (if applicable, Traverse City, and Traverse City Light and Power (TCLP)) before starting work near lighting systems, ITS, and traffic systems. The Contractor must not start this work until MDOT has staked the lighting systems, ITS, and traffic systems.

The Contractor must not start work until arrangements are made for the protection of adjacent utilities or other property where damage might result in expenses, loss, or inconvenience. The Contractor must cooperate with the utility owner in removal, relocation, and reinstallation work.

107.13. Personal Liability of Public Officials

The Commission, City Employees and the City's authorized representatives are not liable, either personally or as officials of the City, for exercising the authorities granted to them by the contract. It is understood that they act solely as agents and representatives of the City.

107.14. No Waiver of Legal Rights

The Department and the Commission are not precluded or estopped by measurements, estimates, or certificates made before or after the completion, acceptance, and payment for the work, from showing the true amount and character of the work performed and materials provided by the Contractor or from showing that these measurements, estimates, or certificates are untrue or incorrectly made or that the work or materials do not conform to the contract. The Department and the Commission are not precluded or estopped, notwithstanding measurements, estimates, or certificates and payments, from recovering from the Contractor and the surety overpayment that may have been caused by the erroneous measurement, estimate, or certification and damages it may have sustained by reason of the Contractor's failure to comply with the terms of the contract. Neither the acceptance by the Director or by the Director's representative, nor payment for or acceptance of the whole or part of the work, nor extensions of time, nor possessions taken by the Department will operate as a waiver of portions of the contract or of power reserved or right to damages provided. A waiver of any breach of the contract is not a waiver of any other or subsequent breach.

107.15. Compliance with Laws; Environmental Protection

The Contractor, in executing this work, shall maintain affected areas within and outside project boundaries free from environmental pollution that would be in violation of federal, state or local regulations.

Waste material disposal shall be in accordance with subsection 205.03P. Excess excavated material not required or suitable for backfill and other waste material must be disposed of in licensed landfills or at other sites for which approval is obtained. The Contractor shall maintain areas covered by the contract and affected public properties free from accumulations of waste, debris and rubbish caused by construction operations. The Contractor shall remove excavated materials from the site. The Contractor shall not burn or bury rubbish or waste materials on the project site or dispose of volatile wastes, such as mineral spirits, oil, chemicals, or paint thinner in storm or sanitary drains. Disposal of wastes into streams or waterways is prohibited. The Contractor shall provide acceptable containers for collection and disposal of waste materials, debris and rubbish.

The Contractor must take the measures during the performance of the work that are necessary to comply with federal, state, and local laws and regulations for the protection of the public health, safety, welfare, and environment. Unless the contract provides otherwise, the costs related to complying with these laws and regulations are included in the contract unit prices for related items of work.

The following are requirements specific to environmental protection matters, that include but are not limited to the following:

A. Control of Air Pollution

1. **Dust Control.** During the construction of a project, the Contractor must maintain adequate dust control measures to prevent any detriment to the safety, health, welfare, or comfort of any person or damage to property, residence, or business. Dust resulting from the Contractor's performance of the work shall be controlled by the Contractor by using a dust palliative as directed by the Engineer. If the contract does not contain a pay item for dust control, the cost of the dust control is included in the contract unit price for other pay items.
2. **Hot Mix Asphalt (HMA) Plants, Concrete Plants, and Crushing Plants.** All HMA plants, concrete batch plants, and crushing plants must be in compliance with the Natural Resources and Environmental Protection Act (MCL 324.101 et seq.), including, but not limited to, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act (MCL 324.5501 et seq.) and the rules of the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

All portable HMA plants, portable concrete batch plants, and portable crushing plants are required to have an EGLE permit to install.

3. **Reserved.**
4. **Demolition or Renovation Notification.** The Contractor must not begin demolition of any building or structure without first submitting the appropriate notifications as required by the contract.

The Contractor must provide copies of all notifications to the Engineer prior to beginning demolition or before removing any regulated asbestos-containing material.

B. Construction Site Storm Water Runoff.

The Contractor shall comply with laws, rules and regulations of the State of Michigan and agencies of the United States Government prohibiting the pollution of lakes, wetlands, streams, or river waters from dumping of refuse, rubbish or debris. The Contractor shall divert sewage and waste

flow, including stormwater flow, interfering with construction and requiring diversion to sewers leading to a wastewater treatment plant. The Contractor shall not cause or permit action to occur which would cause an overflow to an existing waterway. Prior to commencing excavation and construction, the Contractor shall obtain Engineer's agreement with detailed plans showing procedures intended to handle and dispose of sewage, groundwater and stormwater flow, including dewatering pump discharges and bypasses.

The Contractor must perform the work in a manner that will prevent sediment from entering watercourses, streams, lakes, and wetlands. In addition to the soil erosion and sedimentation control requirements of section 208, the Contractor must employ good housekeeping and pollution prevention practices to prevent construction-related pollutants from entering the storm water drainage system or being carried outside the project limits by storm water runoff. Potential sources of storm water pollutants include, but are not limited to, the following:

1. Materials storage areas;
2. Equipment maintenance and refueling areas;
3. Construction waste receptacles;
4. Concrete truck clean-out areas;
5. Sanitary facilities; and
6. Field office sites.

C. **Control of Hazardous and Polluting Materials.** The Contractor must use, store, and dispose of hazardous materials, hazardous waste, toxic materials, and/or polluting materials in accordance with applicable federal, state, and local laws and regulations.

1. **Fueling and Equipment Maintenance Area.** The Contractor must store fuel, perform equipment maintenance, and clean or wash vehicles and equipment, including concrete trucks, in an area equipped as follows:
 - a. Located at least 50 feet from storm drainage systems, wetlands, or watercourses;
 - b. Paved or lined with a surface that will protect the soil, ground water, and surface water;
 - c. Surrounded by a containment berm; and
 - d. Equipped with a sump to collect and properly dispose of waste material.

The Contractor may propose a written plan to provide alternative protective measures for fueling and equipment maintenance areas to the Engineer for approval.

The Contractor must restore these areas in accordance with the project clean-up requirements in section 209.

2. Equipment Cleaning and Washing. The Contractor must:

- a. Limit vehicle and equipment cleaning or washing within the project limits to that necessary to control vehicle tracking;
- b. Notify the Engineer before cleaning or washing vehicles or equipment within the project limits with soap, solvents, or steam;
- c. Contain any resulting waste and recycle or dispose of the waste in accordance with state and federal regulations;
- d. Not use materials containing petroleum distillates to clean vehicles or equipment; minimize the use of solvents for this purpose;
- e. Inspect sumps regularly and remove liquids and sediments as necessary;
- f. Use as little water as possible if washing vehicles or equipment with water; and
- g. Equip hoses with positive shutoff valves.

3. Storage of Materials On or Under Bridges and Structures. The Contractor must not store equipment or materials with the following U.S. Department of Transportation Material Class Designations under or within 50 feet of Department or local agency-owned bridges and structures:

- a. Class 1 – Explosives;
- b. Class 2 – Gases: Flammable, non-flammable, poisonous, or toxic;
- c. Class 3 – Flammable liquids;
- d. Class 4 – Flammable solids;
- e. Class 5 – Oxidizing substances; organic peroxides;
- f. Class 6 – Poisonous (toxic) material; infectious substances;
- g. Class 7 – Radioactive material;
- h. Class 8 – Corrosives; and
- i. Class 9 – Miscellaneous dangerous goods

The Contractor must not store plastic, polyethylene, or other petroleum-based products or other flammable or combustible materials under or within 50 feet of bridges and structures owned by the Department or local agencies.

Staging and storage of construction equipment using these materials will be allowed on the bridge decks related to the Contractor's active construction operations. The Engineer will approve appropriate protective measures for fueling and maintenance of equipment on bridge decks.

D. Street Cleanliness

The Contractor shall clean and keep clean the streets, the work area and public and private property occupied by Contractor from waste materials or refuse resulting from Contractor's operations. Trucks hauling excavated material, cement, sand, stone or other loose materials from or to the site shall be tight so that no spillage will occur on adjacent streets. Before trucks start away from the site, their loads shall be trimmed. Should the Contractor be negligent in maintaining the proper street cleanliness, the City Engineer will take necessary steps to perform such cleaning and shall charge the Contractor for all the costs therefore.

107.16. Forest Protection

A. Reserved

107.17. Use of Explosives

Before using explosives on the project, the Contractor must obtain prior written approval from the Engineer. Such approval does not relieve the Contractor of liability or responsibility for damages resulting from the use of explosives. The Contractor must comply with all laws, regulations, and ordinances and exercise the utmost care not to endanger life or property, including new work.

107.18. Work over Navigable Waters

The Contractor must perform work on or over navigable waters in accordance with any permits issued by the controlling authority.

107.19. Hauling on Local Roads and Streets

The Contractor must ensure that haul loads are within the legal load limits established by the local government agency. The Contractor is responsible for preventing the tracking of material onto local roads and streets and must remove such material at no additional cost to the Department.

107.20. Private Railroad Crossing for Haul Purposes

If a temporary railroad crossing is necessary, the Contractor is responsible for the following:

- A. Requesting that the railroad company construct the temporary crossings and notifying the railroad company in advance of the Contractor's use of the temporary crossings. This is subject to the Contractor's meeting the railroad company's requirements, including executing agreements and providing insurance coverage.
- B. Determining and complying with the requirements of the railroad company covering the location, installation, protection, maintenance, use, and removal of the temporary crossing. Unless otherwise required by the contract, the costs related to the temporary crossing, including but not limited to the following, are included in the contract unit prices for other pay items:
 - 1. Installation, protection, maintenance, and removal of the temporary crossing;
 - 2. Flaggers;
 - 3. Construction engineering inspection by the railroad company;
 - 4. Contractual liability insurance for the temporary crossing and any other insurance required by the railroad company; and
 - 5. Incidental work, such as drainage facilities and the removal, alteration, and replacement of railroad fences.

107.21. Open to Traffic

The Contractor must not open the project or sections thereof to traffic until approved by the Engineer. The Engineer's approval of the project or section thereof for traffic does not constitute partial or final acceptance of the project or any part of it or a waiver of any provision of the contract. The Contractor is not responsible for the costs of maintaining the section of the project opened for traffic.

If the Engineer approves the entire project or any section thereof for traffic and the Contractor opens it to traffic before final acceptance and final payment, the Contractor must perform the remainder of the work in a manner that causes the least obstruction to traffic. The Contractor must make provisions for the safety of traffic as required by the contract. Legal weight restrictions in the Michigan Vehicle Code (MCL 257.1 et seq.), local ordinances, and legal postings apply to sections of the project opened to traffic.

Before the seasonal suspension, the Engineer will determine the work the Contractor must complete to bring the project to an acceptable condition for traffic and winter maintenance, including necessary traffic and erosion control measures. Until the Contractor completes this work, the Engineer will not designate the project as approved for traffic.

On sections of the project opened to traffic, the Contractor must correct damage due to defective materials, faulty workmanship, negligent acts of the Contractor, and natural causes (except as provided in subsection 107.11) at no additional cost to the Department.

107.22. Construction Staging Areas

The Contractor must not use any public recreation area as a staging area, marshalling yard, or storage facility or for any other construction support unless it is specified in the contract.

Public recreation areas include parks, trails, game areas, wildlife and waterfowl refuges, playgrounds, golf courses, athletic fields, and similar areas that are publicly owned by public school districts or local, state, or federal governments.

Any agreements negotiated between the Contractor and the owner of a public recreation area before or after the award of the contract will not be considered valid by the Department.

If the Engineer determines that the Contractor is in noncompliance with this subsection, the Engineer may terminate the contract in accordance with subsection 108.12. This will include the immediate restoration of the public recreation area at the Contractor's cost.

107.23. National Pollutant Discharge Elimination System Inspection and Response

Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act (MCL 324.3101 et seq.) and Part 21, Wastewater Discharge Permit Rules/National Pollutant Discharge Elimination System (NPDES), of the Natural Resources and Environmental Protection Act (MCL 324.21101 et seq.) apply to projects with a potential for disturbance of land totaling 5 acres or greater during construction. The Department will file a Notice of Coverage with the EGLE for these projects.

The Engineer will assign a Storm Water Management-Construction Site or Soil Erosion and Sedimentation Comprehensive Inspector to perform project reviews for NPDES compliance. All deficiencies will be brought to the attention of the Contractor. The project will be inspected every 7 days or within 24 hours of a precipitation event that results in discharge from the site, including weekends regardless of whether the Contractor is working. A

discharge is defined as storm water runoff that does not infiltrate the ground and leaves the construction site or enters waters of the state after a precipitation event.

The Contractor has 5 calendar days in which to complete, or have completed, all corrective actions except those of an emergency nature that are required as a result of the NPDES inspection. Corrective actions of an emergency nature will be determined by the Engineer and will include sedimentation that occurs on or in any project facilities, waters of the state, and erosion that affects the support of the roadbed or the safety of the public. Emergency corrective actions must be completed in an acceptable manner by the Contractor within 24 hours after notification.

107.24. Federal Aviation Administration Notification for Structure Work

The Contractor is required to notify the FAA and/or local airport zoning authority if any proposed permanent structures or temporary structures, including, but not limited to, temporary scaffolding, forms, poles, and crane booms, exceed the criteria listed below, no matter the duration and must acquire any necessary permits if the proposed construction or alteration of permanent or temporary structures meets any of the following criteria:

- A. Anything over 200 feet above ground level at the project site, including temporary construction and/or equipment;
- B. Any changes or variations that exceed the heights or locations set forth in permits included in the contract; or
- C. Any changes or variations that exceed the height set forth in the contract if permits are not included in the contract.

The Contractor must schedule operations to allow for the maximum 45-day FAA review period. Extensions of time will not be granted for failure to submit the FAA notifications 45 days prior to commencement of construction activities subject to notification requirements.

The Department will include a copy of any permits, such as FAA, Michigan Tall Structure, and local or municipal airport zoning, obtained by the Department.

Section 108. Prosecution and Progress

108.01. Subcontracting of Contract Work

The Contractor shall give personal attention to the fulfillment of the Contract and shall keep the work under its control.

No subcontractor will be recognized as such, and all persons engaged in the work or construction will be considered as employees of the Contractor and the Contractor will be held responsible for their work, which shall be subject to the provisions of the Contract and specifications.

The Contractor shall perform with its own organization contract work amounting to not less than Fifty (50%) percent of the original total contract price, except that any designated "Specialty Items" may be performed by subcontract, and the amount of any such "Specialty Items" so performed may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor with its own organization.

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

Materials produced and/or purchased by the Contractor may be included in the 50% required to be performed. The phrase "its own organization" only includes workers employed and paid directly, inclusive of employees who are employed by a lease agreement and equipment owned and rented with or without operators. Employees or equipment of a subcontractor, assignee, or agent of the Contractor will not be considered part of "its own organization." Leased employees may only be included in "its own organization" if the Contractor meets all the following conditions:

- A. The Contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- B. The Contractor remains responsible for the quality of the work of the leased employees;
- C. The Contractor retains all power to accept or exclude individual employees from work on the contract; and
- D. The Contractor remains responsible for the payment of predetermined minimum wages, submission of payrolls, statements of compliance, and all other federal regulatory requirements.

The amount of Specialty Classification work performed will be deducted from the total original contract amount before determining the 50% available for subcontracting.

Subcontracting any portion of the work does not relieve the Contractor of full responsibility for the performance of the contract. The Contractor further agrees that every subcontract entered for the performance of the contract will contain a provision requiring nondiscrimination in employment binding upon each subcontractor. Breach of this covenant may be regarded as a material breach of the contract.

The Department will determine the value of subcontracted work by multiplying the number of units of a subcontracted pay item by the contract unit price for that pay item. If only a portion of a pay item is subcontracted, only that portion of the work to be performed by a subcontractor will be used for determining the percentage of the total work subcontracted. The Department will determine whether the subdivision of the subcontracted pay item and the unit price are reasonable. Bonds furnished by the subcontractor do not reduce the Contractor's bonding requirements.

A subcontractor must perform not less than 50% of the total value of the subcontracted work within "its own organization." This requirement is also applicable to and binding upon successive subcontracts. If any subcontractor is working or subcontractor's equipment is being operated in violation of this subsection, the Engineer may direct the immediate removal of the subcontractor or the subcontractor's equipment. The Contractor is responsible for any costs or damages resulting from such removal. The Contractor's responsibilities in the performance of the work, in case of a subcontract, are the same as if the Contractor performed the subcontracted work with its own organization.

108.02. Limitations of Operations

Unless the contract requires or the Engineer approves otherwise, the Contractor must not perform construction operations on Sundays. The Contractor may perform emergency repairs or install proper protection of the work on Sundays.

The Engineer may require the Contractor to cease construction operations during holiday periods or at other times as may be determined to be in the interest of the public.

108.03. Competence of Workers

The Contractor must provide the labor to perform the work as required by the contract. The Contractor's workers must possess the skill and experience to perform the assigned work in accordance with the contract.

If the Engineer determines that any worker employed by the Contractor or by any subcontractor does not perform the work in a proper and skillful manner or is intemperate or disorderly, the Engineer will issue a written direction for removal of the worker. The Engineer's written direction will state in detail the reasons for the removal of the worker including specific reference to the worker's offending conduct and the affected work operation(s). The Contractor may appeal the Engineer's direction, during which the Engineer's direction will be suspended. The Contractor may not employ the removed worker again in any portion of the work without the Engineer's approval.

If the Engineer's direction stands and the Contractor fails to do either of the following, the Engineer may suspend the work by written notice, withhold partial payment, or both until the Contractor complies with the contract requirements:

- A. Remove such worker or workers as required above; or
- B. Provide the labor for the proper prosecution of the work.

108.04. Adequacy of Methods and Equipment

The Contractor must use equipment of sufficient size and in a mechanical condition necessary to perform the work required by the contract.

If the contract does not require specific methods and types of equipment to perform an item of the work, the Contractor may use any method or type of equipment that will accomplish the work in accordance with the contract.

If the contract requires specific methods and types of equipment to perform an item of the work and the Contractor wants to use another method or type of equipment, the Contractor must obtain the Engineer's approval before using the other method or type of equipment. The Contractor must submit a written request to the Engineer that includes a full description of the proposed methods and types of equipment and the reasons for requesting the substitution. If the Engineer approves the request, the Contractor remains fully responsible for performing the work in accordance with the contract. If, after a reasonable trial, the Engineer determines that the work performed is not in accordance with the contract, the Contractor must stop using the substitute method or type of equipment. The Contractor must remove and replace the non-conforming work or take other corrective actions approved by the Engineer. The Contractor is not entitled to an extension of time or compensation for delays, inconvenience, or any other cause attributed to the failure of the Contractor's substituted method or type of equipment to accomplish the work in accordance with the contract, even if the Engineer approved of the substitution.

108.05. Prosecution and Progress

The Contractor must not begin work until after the award of the contract. After the Department notifies the Contractor of the award of the contract, the Contractor must perform the work according to the progress schedule and with sufficient resources to adequately complete the work within the contract time.

If the Contractor fails to perform the work in accordance with the approved progress schedule or the Department believes that the Contractor is not performing the work in a manner that achieves completion within the contract time, the Engineer may require the Contractor to provide an updated progress schedule, detailing the efforts required to meet the requirements of the progress clause. If the Contractor fails to perform as directed, the Engineer may place the Contractor in default in accordance with subsection 108.11.

If the Contractor fails to perform the work in accordance with the approved progress schedule, the Department may prevent the Contractor from bidding future contracts until the Contractor establishes a satisfactory rate of progress.

If the contract requires it, the Contractor must submit a critical path schedule using the critical path method. Upon approval, the critical path method schedule will replace the progress schedule.

A. Progress Schedule

1. **General.** The Department's approval of any schedule does not relieve the Contractor of its responsibilities to adjust labor and equipment forces or work schedules and provide sufficient materials to complete the work within the contract time.

Within ten days after the pre-construction meeting and prior to starting work, the Contractor shall prepare and submit to the City Engineer a construction progress schedule showing in a clear, graphical manner the proposed dates for the commencement, progress and completion of the work. The progress schedule shall be predicated on the completion of the work on or before the date of completion as stated in the Instructions to Bidders. Upon approval of the progress schedule, it shall become a part of the contract documents.

The Engineer will provide documented approval, comments, or rejection within 7 calendar days of receipt of the Contractor's submittal, resubmittal, or responses. The Contractor must resolve all responses within 7 calendar days of receipt of any Engineer requests or rejections.

If the progress schedule is not approved within 30 calendar days of original submittal or the Contractor fails to update the progress schedule, the Engineer may withhold all or part of contract payments until the progress schedule, or update, is approved.

The cost of preparing and updating the progress schedule will not be paid for separately but will be considered included in other bid items.

2. **Progress Schedule Format and Content.** Unless the contract requires otherwise, the Contractor must submit a progress schedule using a diagramming method, bar chart, or similar describing the work activities with the associated relationships.

The progress schedule must reflect the scope of work and sequence of operations required by the contract and must:

- a. Include and identify all activities that are the controlling operations;
- b. Include non-controlling operations and other activities to detail the work necessary to complete the contract including activities for submittals, working and shop drawing preparation, submittal review time for the Department, material procurement and fabrication, and the delivery of materials, plant, and equipment, third-party operations, or other activities;
- c. Identify the planned start and completion dates for each activity.
- d. Provide a duration, ranging from 1 to 20 days, for each construction activity, breaking longer activities into two or more activities distinguished by the addition of a location or some other description;
- e. Include a written narrative that provides a description of the planned work crews, work days per week, number of shifts per day, number of hours per shift, and holiday and seasonal suspensions or other non-work periods;
- f. Include other pertinent information that helps define the overall plan to complete the contract or as requested by the Engineer; and
- g. Include all contract-specified dates.

The Contractor must allow for normal weather delays when developing the progress schedule.

The Department may allow overlapping or concurrent controlling operations if the Contractor provides a written explanation of the associated overlap or concurrent controlling operation for each

occurrence. The Contractor must submit the explanation with the progress schedule.

Progress Schedule Modifications. The Contractor and the Engineer will assess progress and discuss the schedule as needed.

If, during the course of the work, it becomes apparent that the progress schedule is unrealistic, it shall be revised and resubmitted to the Engineer for approval. Upon approval of the revised progress schedule, a change order will be prepared and it shall become a part of the contract documents.

At a minimum, progress schedule updates will include the actual start and finish of each activity, percentage completed, and remaining durations of activities started but not yet completed.

The Engineer may request a modified progress schedule when any of the following events occur:

- h. The Contractor's rate of progress falls behind that represented in the latest progress schedule;
- i. A delay or contract revision affects a controlling operation, the contract time, or completion dates; or
- j. The Contractor revises the sequence of operations or plan to complete the contract from that represented in the latest progress schedule.

108.06. Determination of Contract Time for Work Day Contracts

Starting no earlier than on the 10th day after the Contractor receives the notice of award or on the date agreed upon between the Engineer and the Contractor, the Engineer will determine and charge work days in accordance with subsections 108.06.A, 108.06.B, and 108.06.C.

The Engineer will provide the Contractor with a written report of the number of work days charged to the contract each week within 6 days after the last day of the week covered by the report. If the Contractor disagrees with the number of work days charged in a report, the Contractor must notify the Engineer in writing and set forth the reasons for disagreement within 21 days after the last day of the week covered by the report. The Contractor's failure to notify the Engineer of disagreement within the times established in this paragraph constitutes acceptance of the Engineer's determination of the number of work days for that time period.

- A. **Full Work Days.** The Engineer will charge full work days for the following days:

1. Every day the Contractor is able to perform work for 6 or more consecutive hours, beginning at the scheduled starting time, on a controlling operation with full and normal efficiency within seasonal limitations, except as listed in subsections 108.06.B or 108.06.C or as required by the contract;
 2. Every day the Contractor elects to work for 6 or more consecutive hours, beginning at the scheduled starting time, or, on a controlling operation with full and normal efficiency within seasonal limitations, except as listed in subsections 108.06.B or 108.06.C or as required by the contract;
 3. Sundays or holidays on which the Contractor performs work if Sunday or holiday work is approved by the Engineer;
 4. Days the Contractor is unable to perform work on a controlling operation due to delayed delivery of materials unless the Contractor identifies and the Department verifies that the delayed delivery is the result of an industry-wide shortage;
 5. Days the Contractor is performing required work, designated by the Engineer, to make the project acceptable for traffic and winter maintenance including emergency work or erosion control maintenance before or during the seasonal suspension; and
 6. Days on which a delay to or suspension of the work is the fault of the Contractor.
- B. Half Work Days.** The Engineer will charge half work days for the following days:
1. Days the Contractor is only able to perform work on a controlling operation for between 3 and 6 consecutive hours beginning at the scheduled starting time for reasons beyond the Contractor's control and not the Contractor's fault or responsibility;
 2. Days the Contractor elects to perform work on a controlling operation for between 3 and 6 consecutive hours beginning at the scheduled starting time for reasons beyond the Contractor's control and not the Contractor's fault or responsibility; and
 3. Days the Contractor is unable to perform work on a controlling operation with full and normal efficiency for reasons beyond the Contractor's control and not the Contractor's fault or responsibility, including work stoppages due to a labor dispute.
- C. No Work Day.** The Engineer will not charge work days for the following days:

1. Saturdays unless provided for in the contract;
2. Any day the Contractor is unable to perform work on a controlling operation for more than 3 consecutive hours beginning at the scheduled starting time for reasons beyond the Contractor's control and not the Contractor's fault or responsibility, including work stoppages due to a labor dispute;
3. Any day work is performed on the controlling operation during the seasonal suspension unless otherwise specified in the contract or in subsection 108.06.A.4;
4. Any day when suspension of work on the controlling operation is required, through no fault of the Contractor, for reasons including, but not limited to, the following:
 - a. Right-of-way or right-of-entry was not available when a controlling operation was required to start;
 - b. Delays resulting from utilities not moved out of the Contractor's work area; and
 - c. Work on an adjacent project prevented the Contractor from performing work.

108.07. Reserved**108.08. Reserved****108.09. Request for Extensions of Time**

- A. **General.** The Contractor must submit written requests for extensions of time to the Engineer. The request must state the reasons for the extension of time. In case of delays due to unusual weather, the Contractor must submit requests for extension of time within 14 days after the last day of the calendar month in which the delay occurred. The Contractor must submit requests for extensions of time for all other delays within 14 days after the last day of the delay. Failure to submit written requests to the Engineer within the required time frame will constitute a waiver of claim for an extension of time. The Engineer will respond with a written decision within 14 days of receipt of the request for the extension of time.

The Engineer may grant extensions of time with or without liquidated damages. An extension of time to a contract date subject to liquidated damages will apply equally to all contract dates subject to liquidated damages that are impacted by the extension of time. The Engineer will record the number of work days or calendar days granted for each extension of time. Any contract dates extended will thereafter be binding

upon the Contractor and surety as if they appeared in the contract originally.

B. Reserved

C. Reserved

108.10. Liquidated Damages

If the contract requires the Contractor to maintain through-traffic while the Contractor is performing the work or if the contract does not contain a time requirement for opening to traffic, the provisions herein will apply to the contract time only.

The Department will not assess simultaneous liquidated damages for failure to open to traffic on time and for failure to complete within the contract time.

- A. Failure to Open to Traffic within the Contract Time.** Unless the contract requires otherwise, the Department will assess liquidated damages for each calendar day that the project or portion of the project remains unopened to traffic, including time within the seasonal suspension. For seasonal suspension, the Engineer will not designate the project as open to traffic until the project is in an acceptable condition for travel and winter maintenance, including necessary traffic control devices and erosion control measures.

Unless the contract requires otherwise, when the Department has determined that the project or a portion of the project is open to traffic in accordance with subsection 107.21, the Department will discontinue the assessment of liquidated damages for failure to open to traffic.

- B. Failure to Complete within the Contract Time.** The work which the Contractor is required to perform under this contract shall be commenced and fully completed at the time stipulated by the City in a written "Notice to Proceed" to the Contractor. The Contractor must complete the contract on or before the date the contract time expires. The Department will assess liquidated damages for each calendar day that the work remains incomplete. For periods of seasonal suspension, the Department will not assess liquidated damages, except as provided in subsection 108.10.A, or as otherwise required by the contract.
- C. Assessment of Liquidated Damages.**

The Contractor shall be responsible for liquidated damages at the rate noted below per calendar day for each day after the time limit specified in the contract until the project is completed.

Sums assessed as liquidated damages are not penalties but are fixed and agreed-upon liquidated damages due to the Department from the Contractor. The liquidated damages may contain one or more components of damages added together.

1. **Liquidated Damages for Department Oversight Costs.** This component of liquidated damages represents the Department's added cost of engineering and supervision due to the Contractor's failure to open to traffic or complete the work within the contract time. The amount of these liquidated damages will be based on Table 108-1.

**Table 108-1: Schedule of Liquidated Damages
for Department Oversight**

Original Contract Amount		Amount per Calendar Day
From More Than	To and Including	
\$0	\$100,000	\$500
\$100,000	\$500,000	\$800
\$500,000	\$1,000,000	\$1,000
\$1,000,000	\$5,000,000	\$1,500
\$5,000,000	\$15,000,000	\$2,000
Over \$15,000,000		\$4,000

2. **Liquidated Damages for Other Department Costs.** This component of liquidated damages represents the inconvenience to the public, maintenance of detours, and other items that have caused an expenditure of public funds due to the Contractor's failure to open to traffic or complete the work within the contract time. The contract will specify the amount of these liquidated damages.

108.11. Default of Contract

- A. **Notice of Default.** If the Contractor is responsible for any of the following, the Engineer will give the Contractor and surety written notice of default and the action required to be taken by the Contractor and surety:
 1. Failing to prosecute the work with the labor, equipment, or materials sufficient to complete the work within the contract time and according to the progress schedule;
 2. Performing the work improperly;

3. Neglecting or refusing to remove material or to reconstruct work that has been rejected as defective and unsuitable; or
4. Failing to perform the work as required by the contract for any other reason.

B. Termination for Default. If any of the following occurs, the Department will have full power and authority to terminate the contract for cause and take over the uncompleted work from the Contractor and surety, including appropriation and use of any materials on the project. The Department may demand performance of the surety, enter into a completion contract, or undertake any other method that the Department determines may be necessary to complete the work:

1. The Contractor or surety, within 10 days after the notice of default, does not proceed satisfactorily;
2. The Contractor commits any act of bankruptcy, becomes insolvent, or is declared bankrupt;
3. The Contractor allows a final judgment against the Contractor to remain unsatisfied for 5 days;
4. The Contractor makes an assignment for the benefit of the Contractor's creditors; or
5. The Contractor files proceedings for reorganization in accordance with the Bankruptcy Act, or such proceedings are filed against the Contractor.

If the Department terminates the contract for cause, the Department will deduct all additional costs and damages and the costs and charges of completing the work from monies due or to become due the Contractor. If the total of the damages, costs, and charges exceeds the balance of the contract amount that would have been payable to the Contractor had the Contractor completed the work, the Contractor and surety must pay the amount of the overage to the Department upon request.

108.12. Termination of Contract for Convenience

If the Department determines that termination is in the Department's best interest, the Department may terminate the contract for convenience or any portion of the contract. If the Department orders termination of a contract for convenience effective on a certain date, the Department will pay the Contractor for completed or partially completed work as of that date at the contract unit prices or on a force account basis, as determined by the Engineer. If the Department terminates a portion of the contract for convenience, the Department may stop delivery and payment for materials

made unnecessary. The Department will pay for pay items eliminated in their entirety by the termination in accordance with subsection 103.02.F.

The Department may choose to purchase from the Contractor acceptable materials obtained for the work but not used at actual cost delivered to a prescribed location plus 15%. If the Department does not choose to purchase the acceptable materials that were obtained for the work but not used, the Department will pay for actual material costs, plus 15%, for disposal of the acceptable materials in an approved manner.

The Contractor must submit any claim for additional compensation within 60 days after the effective termination date or as otherwise authorized by the Department. The Contractor must make records available to support the validity and amount of compensation sought. The Contractor is not entitled to loss of anticipated profits due to the Department's termination of the contract or any portion of the contract.

The Department's decision to terminate the contract or a portion of the contract will neither relieve the Contractor of its contractual responsibilities for the completed work nor relieve the surety of its obligation for any just claim arising out of the work performed.

A. Immediate Obligations. The Engineer will deliver a Notice of Termination to the Contractor that specifies the extent of termination and the effective date. After receipt of a Notice of Termination, the Contractor must immediately proceed with the following obligations:

1. Stop work as specified in the notice;
2. Place no further subcontracts or orders for materials, services, or facilities, except as necessary to complete the remaining portion of the contract;
3. Terminate all subcontracts to the extent they relate to the work terminated;
4. Transfer title and deliver to the Department the following:
 - a. Fabricated, partially fabricated, or unfabricated parts; all work in progress; completed work; supplies; and other material produced or acquired for the terminated work; and
 - b. Completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, the Contractor would have been required to provide to the Department;
5. Complete the performance of the non-terminated work;

6. With the Engineer, on a date identified by the Engineer, take inventory of acceptable materials obtained for the contract that has not been incorporated into the work; and
7. Take any action necessary, or directed by the Engineer, for the protection and preservation of the property related to the contract that is in the possession of the Contractor and in which the Department has or may acquire an interest.

Section 109. Measurement and Payment

109.01. Measurement of Quantities

The Engineer will determine quantities of materials furnished and of work performed under the contract by methods of measurement and computations that are generally recognized as conforming to good engineering practice. The Engineer will measure quantities of work completed under the contract according to United States standard measures.

The quantities of the various classes of work to be done and materials to be furnished under this contract, which have been estimated as stated elsewhere herein, are approximate and only for the purpose of comparing, on a uniform basis, the bids offered for the work under this contract; and neither the City nor its agents is to be held responsible should any of the said estimated quantities be found incorrect during the construction of the work; and the Contractor shall make no claim for anticipated profit nor for loss of profit, because of a difference between the quantities of the various classes of work actually done or materials actually delivered, and the estimated quantities as herein stated.

Only those items mentioned in the bid form are pay items. It is the Contractor's responsibility to complete those items and to furnish all other materials, workers, and machines to obtain a complete and satisfactory job. All other necessary items for a complete job shall be considered incidental and not pay items.

Unless otherwise required by the contract, manufacturing tolerances established by the industries involved will be accepted.

When required by the Engineer, the Contractor must provide copies of paid freight bills, trucking slips, bills of lading, and paid invoices for any material used in the work. The Contractor and the Engineer will routinely review quantities during the life of the contract.

A. Reserved

B. Reserved

109.02. Scope of Payment

The Department will pay the Contractor for accepted quantities of contract pay items at the contract unit prices, as required by the contract, except as otherwise specified in subsection 103.02.

The Contractor must agree to accept this compensation as full payment for the following:

- A. Performing the work; and
- B. Compensation for loss or damage arising from the nature of the work or from the action of the elements (except as specified in subsection 107.11) or from any unforeseen difficulties that may be encountered during the prosecution of the work.
- C. The City may withhold or nullify the whole or a part of any certificate for progress payment to such extent as may be necessary to protect itself from loss on account of:
 - 1. Defective work not remedied; or
 - 2. Claims filed or reasonable evidence indicating probable filing of claims; or
 - 3. Failure of the Contractor to make payments properly to subcontractors or for material or labor; or
 - 4. A reasonable doubt that the Contract can be completed for the balance then unpaid; or
 - 5. Damage to another contractor.
- D. When the above grounds are removed, payment shall be made for amount withheld because of them.

109.03. Payments for Increased or Decreased Quantities

Whenever the quantity of any item of work as given in the contract is increased or decreased, payment for the item of work will be based on the quantity completed. The payment will be authorized at the unit price for the

item named in the contract, except as otherwise provided in subsection 103.02.

109.04. Progress and Partial Payments

The Engineer will make progress payments for units of work completed and partial payments for delivered and stockpile materials. Payments will be made in a timely manner; however, no claim will be considered for delayed payment.

Progress payments do not constitute partial or full acceptance of the work. Acceptance of the work is specified in section 109.07.

- A. **Completed Work.** The Engineer will make progress payments based upon estimates prepared by the Engineer of the work completed.

The Contractor shall submit to the City an application for each payment and shall submit a Contractor's Declaration stating that he has not performed any work, furnished any material, sustained any loss, damage or delay for any reason, including soil conditions encountered or created, or otherwise done anything for which he will ask, demand, sue for or claim compensation from the City other than as indicated on the Contractor's Declaration and, if required, shall submit receipts or other vouchers showing its payments for materials and labor, including payments to subcontractors.

Unless otherwise agreed upon, payments, based on progress estimates, will be made monthly in accordance with the City's standard practices for the work completed during the preceding month for Ninety (90%) percent of the work completed, less any deductions or reservation which may be made in accordance with the terms of the Contract. No allowance will be made for materials furnished, unless incorporated in the finish work, unless otherwise stated.

The estimates are subject to final payment in accordance with section 109.07. Progress payments will be made if all of the following occur:

1. The work is progressing according to the progress or critical path method schedule; and
2. The written directives of the Engineer and contract requirements are being fulfilled.

No payment shall be considered as acceptance of the work or any portion thereof prior to the final completion of the work, and the payment of the

final estimate. The final payment will be made according to the requirements specified under subsection 109.07.D.

B. Reserved

109.05. Payment for Contract Revisions

- A. **General.** The Department will pay for contract revisions, excluding those resulting from increased or decreased quantities of pay items covered by subsection 109.03, using the sequence specified in subsection 109.05.B and 109.05.C. This payment covers all costs for performing the revised work, delay costs, and all other associated costs the Engineer deems reasonable. The Department may direct the Contractor, at any time, to perform the revised work under force account.
- B. **Contract Unit Prices.** The Engineer will attempt to price revised work using contract unit prices.
- C. **Negotiated Prices.** The Engineer and the Contractor will negotiate the price of a contract revision if the Engineer and the Contractor cannot agree on a price using contract unit prices.

The Contractor must provide an estimate of the proposed unit prices or lump sum price for the contract revision that includes the cost of performing the revised work, delay costs, and all other associated costs, plus a reasonable allowance for profit and applicable overhead. The Engineer may request that the Contractor justify the estimate by providing one or more of the following used in deriving the estimate:

- 1. Contractor's labor requirements, by trade, in hours for each task;
- 2. Contractor's equipment costs and time requirements;
- 3. Material costs; and
- 4. Any specialty subcontractor costs.

The Contractor must provide the justification within 5 calendar days after the Department's request. The Department will respond to the estimate within 5 calendar days after receipt of the Contractor's justification. The Department and the Contractor can mutually agree to extend these 5-day requirements.

D. Reserved

E. Reserved

F. **Reserved**

G. **Reserved**

109.06. Source of Supply and Carrier Rates on Materials

The following do not constitute cause for claim for extra compensation:

- A. The inability to secure satisfactory materials, for reasons beyond the Contractor's control, from the source upon which the bid was based, unless contract-specific single-source suppliers are specified by the Department; or
- B. Changes in carrier rates or the alteration of transportation facilities for these materials during the life of the contract.

109.07. Final Inspection, Acceptance, and Final Payment

- A. **Partial Acceptance.** Upon completion of a portion of the work, the Contractor may request, in writing, partial acceptance of that portion of the work. Within 7 days of the Contractor's written request, the Engineer will conduct an inspection to determine whether the Contractor has satisfactorily completed that portion of the work in accordance with the contract. Within 7 days of the inspection, the Engineer will provide written notice of either partial acceptance for that portion of the work and the effective date or an explanation for rejecting the Contractor's request for partial acceptance.

Partial acceptance will relieve the Contractor of maintenance responsibility and third-party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third-party damage claims, the Department does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor's operations. The Contractor must not construe partial acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under section 107.

- B. **Delayed Acceptance.** Upon completion of contract work items designated for delayed acceptance, the Contractor must notify the Engineer, in writing, of the completion of the designated work. Within 7 days of the Contractor's written request, the Engineer will conduct an inspection to determine whether the Contractor has satisfactorily

completed the designated portion of the work in accordance with the contract. Within 7 days of the inspection, the Engineer will notify the Contractor, in writing, of the date the delayed acceptance period begins.

Delayed acceptance will relieve the Contractor of maintenance responsibility and third-party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third-party damage claims, the Department does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor's operations. The Contractor must not construe delayed acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under section 107.

C. Final Inspection and Final Acceptance

Final Inspection. After final cleaning and upon written notice from the Contractor that work is completed, the Engineer will make preliminary inspection with the City's representative and Contractor present. Upon completion of the preliminary inspection, the Engineer will notify the Contractor in writing of particulars in which the completed work is defective or incomplete. Upon receiving written notice from the Engineer, Contractor shall immediately undertake work required to remedy defects and complete the work to the satisfaction of the Engineer.

After the items as listed in Engineer's written notice are corrected or completed, the Contractor shall inform the Engineer in writing that the required work has been completed. Upon receipt of this notice the Engineer, in the presence of the City's representative and the Contractor, shall make final inspection of the project.

Should the Engineer find all work satisfactory at the time of final inspection, the Contractor will be allowed to make application for final payment. Should Engineer still find deficiencies in the work, the Engineer will notify the Contractor in writing of deficiencies and shall not approve Contractor's request for final payment until such time as Contractor has satisfactorily completed the required work.

After achieving satisfactory final inspection, the Contractor is relieved of the duty of maintaining and protecting the project. In addition, the Contractor is relieved of its responsibility for third-party damage claims and for damage to the work that may occur after satisfactory final inspection.

Final Acceptance. Within 7 days of satisfactory final inspection and submission of all required contract documentation by the Contractor, the Engineer will give the Contractor written notification of final acceptance.

The Contractor, without prejudice to the terms of the contract, is liable to the Department at any time, both before and after final acceptance, for latent defects, fraud, such gross mistakes as may amount to fraud, or actions affecting the Department's rights under any warranty or guarantee.

D. Final Payment. Within thirty (30) days after the completion and acceptance of the work under this Contract to the satisfaction of the City and in accordance with all and singular terms and stipulations herein contained, the City shall make final payment from a final estimate made by the Engineer. The Contractor will have 30 calendar days of issuance of the final estimate to file a claim or objections to the quantities within the final estimate. If no claim or objections are filed within 30 calendar days, the Department will process the final estimate for approval and final payment. At that time, the Contractor will be furnished a copy of the approved final estimate.

1. The final payment will be made when the Contractor has provided the following:
 - a. All reports or documents required by the Department including;;
 - i). Record Drawings. Unless otherwise directed by the Engineer, before final retainage is released, the Contractor shall submit to the Engineer a current listing and description of each change incorporated into the work. The Engineer will prepare a set of record drawings for the project, which will include the changes made in materials, equipment, locations and dimensions of the work.
 - ii). O & M Manuals.
 - Where specified, furnish editable electronic copy and pdf of complete instruction manuals for installation, operation, maintenance and lubrication requirements for each unit or common units of mechanical and electrical equipment or system. Contractor shall assemble the O & M Manuals into one set for the entire project. Manuals shall be customized to describe the equipment actually

furnished, and shall not include extraneous data for models, options or sizes not furnished.

- Each manual for equipment controls, accessories and associated appurtenances, shall be complete in all respects and shall include the following:
 1. Diagrams and illustrations.
 2. Performance and nameplate data.
 3. Installation instructions, procedure for starting and proper adjustment.
 4. Test procedures, procedure for operating and shutdown instructions for both short and extended durations.
 5. Emergency operating instructions and troubleshooting guide.
 6. Maintenance and overhaul instructions, illustrated with detailed assembly drawings showing each part with part numbers and sequentially numbered parts list.
 7. List of electrical relay settings and control and alarm contact settings.
 8. Electrical interconnection wiring diagram for equipment furnished, including all control and lighting systems.
 9. Results of field functional and performance tests as required under the "Contract Closeout Submittals" paragraph of the General Specifications.
 10. See "Electrical Technical Specifications" for additional specific O & M manual requirements.
- Unless otherwise directed by the Engineer, the Contractor shall revise and resubmit manuals, or portions

of manuals, found to be missing or incomplete from the Engineer's punch list.

iii). Warranties. The Contractor shall furnish all manufacturer's warranties for products or systems specified to be provided under a special warranty.

b. The consent of the surety for payment of the final estimate;
and

c. Before final payment is made, the Contractor shall make a Contractor's Affidavit that all claims of every nature have been paid or a release secured from the surety or sureties approving payment of the final estimate by the City. The final payment, when made, shall be considered as final approval and acceptance of the completed work herein specified. The acceptance by the Contractor of the final payment aforesaid shall operate as and shall be a release to the City and its agents from all claims and liability to the Contractor for anything done or furnished for relating to the work or for any act of neglect of the City or of any person relating to or affecting the work.

2. The Department can recover from the Contractor in the final estimate all overpayments. However, no recovery for overpayment will be made if both of the following conditions exist:

- a. The final estimate is issued more than 6 months after the acceptance of the project; and
- b. The overpayment was paid to a subcontractor not in existence at the time of the final estimate.

Section 110. Mobilization

110.01. Description

This work consists of preparatory work and operations including, but not limited to, the following:

- A. The movement of personnel, equipment, supplies, and incidentals to the project site;
- B. The establishment of the Contractor's offices, buildings, and other facilities to support work on the project including associated job site posters;
- C. Other work and operations the Contractor must perform;
- D. Expenses incurred before beginning work on pay items at the project site; and
- E. Pre-construction costs, exclusive of bidding costs, that are necessary direct costs to the project rather than directly attributable to other pay items under the contract.

110.02. Materials

None specified.

110.03. Construction

All jobsite posters and employment notices required by state and federal regulations and the contract are to be posted in a conspicuous place. Posting of jobsite posters and employment notices (posted display, foreman vehicle binder, etc.) for short-term or mobile operations will be as approved by the Engineer.

110.04. Measurement and Payment

Pay Item	Pay Unit
Mobilization, Max (dollar)	Lump Sum

A. Reserved

- B. If at any time during the project, the Engineer documents that the required jobsite posters and employment notices are not posted appropriately, the Engineer will provide documented instructions to the Contractor that corrective action is required. Upon receipt of the notification of corrective action, the Contractor has 72 hours to correct the deficiency. If the issue cannot be corrected within the 72-hour period, the Contractor will develop a documented implementation schedule for the corrective action and submit the schedule to the Engineer for approval within 72 hours of receiving the original documented notification. If the schedule is not approved, or if the schedule is approved but is not followed, the following actions will occur:
1. The Engineer may stop work on the project until the Contractor completes corrective action; and
 2. The Engineer will process a contract price adjustment in the amount of \$1,000 per calendar day or portion thereof that the corrective action remains incomplete or the implementation schedule is not followed. The contract price adjustment will continue to be assessed until jobsite posters and employment notices are posted appropriately, the Engineer has been notified of the corrective action, and the Engineer has verified the correction.