



CONSTRUCTION PERMIT APPLICATION

Application Completes: Sections I, II, III (optional), IV, VI, and VII

I. IDENTIFICATION

1. Proposed Work Site at: Drum Point - Soccer Complex
 2. Name of Owner in Fee: Township of Brick Tel. (732) 262-1057
 Address 401 Chambers Bridge Rd, Brick, NJ 08724
street municipality zip code
 3. Ownership in Fee: Public ☒ Private ☐
 4. Principal Contractor: Lucas Electric Co. Tel. (609) 448-5218
 Address 1381 Route 130, Windsor, NJ 07726
 License No. OR, if new home, Builder Reg. No. 9750 Exp. Date _____
 Federal Employee No. 22-21-8387 FAX: (609) 448-8612
 5. Architect or Engineer: Birdsall Engineering Tel. (732) 681-1165
 Address 1700 E Street, So. Belmar, NJ 07719
 6. Responsible Person in Charge of Work: Matthew's President
 Tel. (609) 448-5218 FAX (609) 448-8612

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$		
2. Electrical			
3. Plumbing			
4. Fire Protection			
5. Elevator Devices			
6. Subtotal	\$		
7. Less 20% for State Plan Review			
8. Subtotal	\$		
9. DCA Training Fee			
10. Subtotal			
11. Cert. of Occupancy			
12. Other			
13. TOTAL	\$		

VI. BUILDING/SITE CHARACTERISTICS

	(office use only)
1. Number of Stories	
2. Height of Structure	ft.
3. Area — Largest Floor	sq. ft.
4. New Building Area	sq. ft.
5. Volume of New Structure	cu. ft.
6. Construction Classification	
7. Total Land Area Disturbed	sq. ft.
8. Flood Hazard Zone	
9. Base Flood Elevation	ft.
10. Wetlands	yes _____ no _____
11. Max. Live Load	
12. Max. Occupancy Load	

II. PROPOSED WORK

- ☐ Minor Work
- ☒ New Building
- ☐ Addition
- ☐ Alteration
- ☐ Fire Protection
- ☐ Plumbing
- ☒ Electrical
- ☐ Elevator Devices
- ☐ Asbestos Abat. Subch. 8
- ☐ Lead Hazard Abatement
- ☐ Demolition

Est. Cost

4,000.00

49,000.00

44,000.00

OPTIONAL (for office use only)

Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates	Re-viewer
			<u>5/31/01</u>	<u>FM</u>		
			<u>5/31/01</u>	<u>un</u>		

TOTAL COSTS

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

- ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks
- ☐ High Pressure Boilers
- ☐ Pressure Vessels
- ☐ Refrigeration Systems
- ☐ Cross-Connections/Backflow Preventers
- ☐ Hazardous Uses/Places of Assembly
- ☐ Sprinklers
- ☐ Smoke Control Systems in Open Wells
- ☐ Underground Storage Tanks

III. DO YOU WANT: (optional)

- ☐ Partial Releases
- ☐ Prototype Processing

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL

- ☐ Hotels (R-1)
- ☐ Multi-Family (R-2)
- ☐ Two-Family (R-3) BOCA
- ☐ Two-Family (R-4) CABO
- ☐ One-Family (R-3) BOCA
- ☐ One-Family (R-4) CABO

No. of dwelling units:

Before Construction _____
 After Construction _____
 Net Gain or Loss _____

B. NON-RESIDENTIAL

- State Specific Use:
- Use Group:
- Change in Use Group, Indicate Former:

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☒ Check if contractor.

Agent Name Lucas Electric Co.

Address 1381 Route 130

WINDSOR NJ 08561

Telephone (609) 948 5218

Signature Mark Lucas President

III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Zoning Officer									
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Department of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Department of Environmental Protection									
☐ Utility Dig No.									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	Other _____
Electrical _____	Barrier Free _____	
Plumbing _____	Flood Hazard _____	
Fire Protection _____	As Built Elevation Cert. _____	
Mechanical _____	Other _____	

X. CERTIFICATES ISSUED (office use only)

	DATE ISSUED	DATE EXPIRED	DATE REISSUED	DATE EXPIRED
☐ Temporary Certificate of Occupancy	No. _____	_____	_____	_____
☐ Temporary Certificate of Compliance	No. _____	_____	_____	_____
☐ Continued Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Compliance	No. _____	_____	_____	_____
☐ Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Approval	No. _____	_____	_____	_____
☐ Lead Abatement Clearance Certificate	No. _____	_____	_____	_____

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
CONSTRUCTION
PERMIT

Date Issued 05/31/2001
Control #
Permit # 01-1858

IDENTIFICATION Block 548 Lot 21 Qual

Work Site Location DRUM POINT RD
CONCRETE/LIGHT POLES
Owner in Fee TOWNSHIP OF BRICK
Address 401 CHAMBERS BRIDGE RD
BRICK, NJ 08723-
Telephone (732) 681-1165
Contractor LUCAS ELECTRIC CO
Address 1381 RT 130
WINDSOR, NJ 08561-
Telephone (609) 448-5218
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-2118387

Is hereby granted permission to perform the following work:

[X] BUILDING [] PLUMBING [] LEAD HAZARD ABATEMENT
[X] ELECTRICAL [] FIRE PROTECTION [] DEMOLITION
[] ELEVATOR DEVICES [] ASBESTOS ABATEMENT [] OTHER
(Subchapter 8 only)

DESCRIPTION OF WORK:
EXCAVATE HOLES FOR INSTALLATION OF FACTORY PRE CAST CONCRETE BASES
SET BASES AS PER MANUFAC. RECOMMEN. AND BACKFILL W/CONC

NOTE: If construction does not commence within one (1) year of date of issuance,
or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 44,000

Construction Official

[Signature]

05/31/2001
Date

U.C.C. #170 (rev. 3/96)

PAYMENTS (Office Use Only)

Building 0
Electrical 0
Plumbing 0
Fire Protection 0
Elevator Devices 0
Other 0
ICA Training Fee 0
Cert. of Occupancy 0
Other 0
Total 0
Check No. *EXC 111*
Cash
Collected By



**ELECTRICAL
SUBCODE
TECHNICAL SECTION**



Date Received
Date Issued
Control #
Permit #

5/31/01
07-1858

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION, WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 548 Lot Drum Point Rd.

Work Site Location Drum Point Recreation Complex-Soccer Field 5

Owner in Fee/Occupant Township of Brick

Address 401 Chambersbridge Road

Brick, New Jersey 08724

Tele. (732) 262-1057

Contractor Lucas Electric Co.

Address 1381 Route 130

Windsor, New Jersey 08723

Tele. (609) 448-5218 Fax (609) 448-8612

Lic. No. 9758

Federal Emp. No. 22-211-8387

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[] Pole/Pad # [] Temporary [] Other

Building Occupied as Utility Co.

Est. Cost of Elec. Work \$ \$40,000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial INSPECTIONS

[] No Plans Required Type: Failure Failure Approval Initial

[] Building [] Plumbing Rough ✓

[] Fire [] Elevator Temp. Serv.

[] Elec. Plans Approved Const. Serv.

Date: 5/30/01 TCO

Approved by: Other

Service

Final

SUBCODE APPROVAL Temp. Cut-in-Card Date Issued

[] CO [] CCO [] CA Final Cut-in-Card Date Issued

Approved by:

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Applicant's Signature/Contractor's Seal and Signature

[X] Licensed Electrical Contractor [X] Exempt Applicant

D. TECHNICAL SITE DATA

QTY. SIZE

ITEMS

Lighting Fixtures

Receptacles

Switches

Detectors

Light Poles

Motors—Fract. HP

Emergency & Exit Lights

Communications Points

Alarm Devices/F.A.C. Panel

TOTAL NUMBERS

Pool Permit with UV Lights

Storable Pool/Spa/Hot Tub

KW Elec. Range/Receptacle

KW Oven/Surface Unit

KW Elec. Water Heater

KW Elec. Dryer/Receptacle

KW Dishwasher

HP Garbage Disposal

KW Central A/C Unit

HP/KW Space Heater/Air Handler

KW Baseboard Heat

HP Motors 1/+ HP

KW Transformer/Generator

AMP Service 480v 3Ø

AMP Subpanels

AMP Motor Control Center

KW Elec. Sign/Outline Light

amp Lighting Contactor

1 30

FEE (Office Use Only)

Administrative Surcharge \$

Minimum Fee \$

DCA Training Fee \$

TOTAL FEE \$

U.C.C. F120
(rev. 3/98)

1 White = Inspector Copy
3 Pink = Office Copy

2 Canary = Office Copy
4 Gold = Applicant Copy



BUILDING SUBCODE TECHNICAL SECTION

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 548 Lot 21
Work Site Location Drum Point - Soccer Fields Field 5 & 6
Drum Point Road, Brick, New Jersey 08724
Owner in Fee Township of Brick
Address 401 Chambersbridge Road
Brick, New Jersey 08724
Tel. (732-) 262-1057
Contractor Lucas Electric Company, Inc.
Address 1381 Route 130
Windsor, New Jersey 08561
Tel. (609) 448-5218 Fax (609) 448-8612
Lic. No. or Bids. Reg. No. 9758
Federal Emp. No. 22-211-8387

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)	Initial
			Type	Failure	Approval
☒ All	<u>5-30-94</u>	<u>ES</u>	Footing		
☐ No Plans Required			Foundation		
☐ Footing			Slab		
☐ Foundation			Frame		
☐ Other			Barrier-Free		
Joint Plan Review Required:			Insulation		
☐ Elec. ☐ Plumb. ☐ Fire ☐ Elevator			Finishes		
SUBCODE APPROVAL			Energy		
☐ CO ☐ CCO ☐ CA			Mechanical		
Date: _____			TCO		
Approved by: _____			Other		
			Final		
			Barrier-Free		

B. BUILDING CHARACTERISTICS

Use Group	Present	Proposed
Constr. Class	Present	Proposed
No. of Stories		
Height of Structure		
Area — Largest Floor		
New Bldg. Area/All Floors		
Volume of New Structure		
Total Land Area Disturbed		

Est. Cost of Bldg. Work:

1. New Bldg.	\$ <u>4,000.00</u>
2. Alteration	\$ <u> </u>
3. Total (1+2)	\$ <u>4,000.00</u>



Date Received
Date Issued
Control #
Permit #

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

Excavate holes for installation of factory pre cast concrete bases. Set bases as per manufacture recommendations and backfill with concrete.

****This is a non structural pour****

FEE (Office Use Only)

TYPE OF WORK:	
☐ New Building	
☐ Addition	
☐ Alteration	
☐ Roofing	
☐ Siding	
☐ Fence	
☐ Sign	
☐ Pool	
☐ Asbestos Abatement Subchapter 8	
☐ Lead Haz. Abatement NJAC 5:17	
☒ Other Factory Pre-cast bases	

Administrative Surcharge \$

Minimum Fee \$

DCA Training Fee \$

TOTAL FEE \$

U.C.C. F110
(rev. 3/93)

1. White = Inspector Copy
2. Canary = Office Copy
3. Pink = Office Copy
4. Gold = Applicant Copy



**BUILDING
SUBCODE
TECHNICAL SECTION**

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION WHEN CHANGING CONTRACTORS. NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000

Block 548 Lot 21

Work Site Location Drum Point - Soccer Fields Field 5-66

Owner in Fee Township of Brick

Address 401 Chambersbridge Road

Brick, New Jersey 08724

Tel (732) 262-1057

Contractor Tagas Electric Company, Inc.

Address 1381 Route 130

Windsor, New Jersey 08561

Tel (609) 448-5218 Fax (609) 448-8612

Lic. No. or Bids. Reg. No. 9758

Federal Emp. No. 22-211-8387

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial

☒ No Plans Required 5-30-84 Type: Foundation

☐ All Foundation

☐ Footing Foundation

☐ Foundation Foundation

☐ Frame Foundation

☐ Other Foundation

Joint Plan Review Required: Foundation

☐ Elec. ☐ Plumb. ☐ Fire. ☐ Elevator Foundation

SUBCODE APPROVAL Foundation

☐ CO ☐ CCO ☐ CA Foundation

Date: 5-30-84 TCO Foundation

Approved by: Foundation

Other Foundation

Final Foundation

Barrier-Free Foundation

Dates (Month/Day)

Failure Foundation

Failure Foundation

Failure Foundation

Failure Foundation

Failure Foundation

Failure Foundation

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Failure Foundation

Failure Foundation



C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of

record and am authorized to make this application.

Signature William A. Kennedy

Date Received 5/31/84

Date Issued 01-1858

Control # 01-1858

Permit # 01-1858

Signature William A. Kennedy

Signature William A. Kennedy

Signature William A. Kennedy

Signature William A. Kennedy

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Signature William A. Kennedy

Signature William A. Kennedy

Signature William A. Kennedy

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

Excavate holes for installation

of factory pre cast concrete bases.

Set bases as per manufacture

recommendations and backfill with

concrete.

This is a non structural pour

Excavate holes for installation

of factory pre cast concrete bases.

Set bases as per manufacture

recommendations and backfill with

concrete.

This is a non structural pour

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of factory pre cast concrete bases.

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of factory pre cast concrete bases.

Set bases as per manufacture

recommendations and backfill with

concrete.

FEE (Office Use Only)

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Administrative Surcharge

Minimum Fee

DCA Training Fee

TOTAL FEE

1 White = Inspector Copy

3 Pink = Office Copy

2 Canary = Office Copy

4 Gold = Applicant Copy

U.C.C. F110

(rev. 3/89)

National Electrical Code
Plan Review Record
Township of Brick

Date: 5 30 01

Site Address: Drum Point Soccer

Reviewed By: W

CORRECTION LIST
Description

No.

Plans

Party Called and Phone #: _____

Resubmitted on: _____ By: _____

National Electrical Code
Plan Review Record
Township of Brick

Date: 5-31-01

Site Address: ^{Bill} 548 Lt 1 Drum point Ave

Reviewed By: Wm

C29-54

CORRECTION LIST
Description

No.

① I called Engineer Mr. Rospos Permit is asking for ① plans scanner to want ② ?

② to add any more wiring into that ~~Bas~~ Electrical Room at Drum point does not meet 110-26 table For clearance article 110-26 a 110-26 a2
110-26 b 110-26 b 110-26 e
~~110-32~~ ~~110-34~~ ~~110-33~~

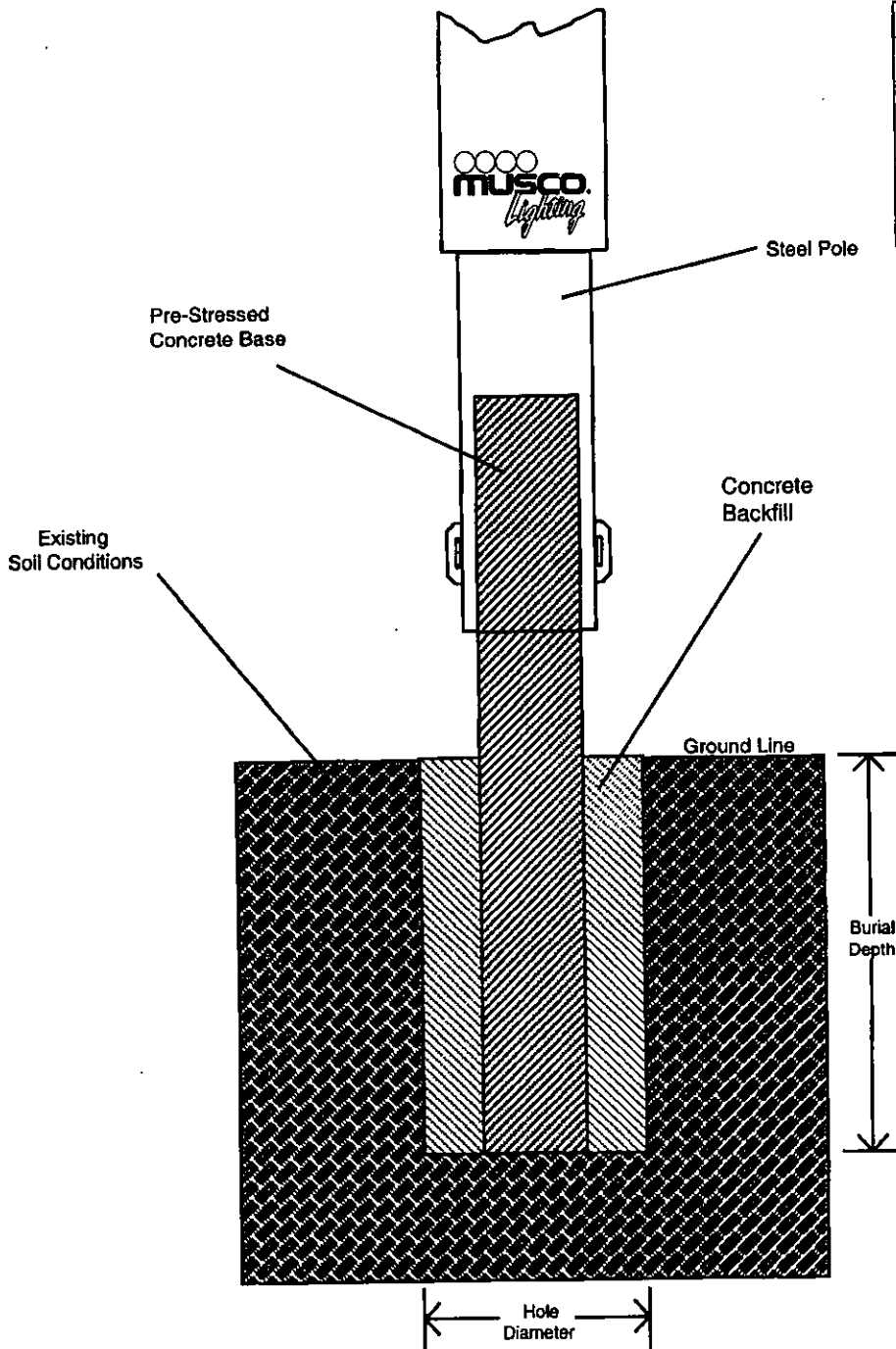
Party Called and Phone #: _____

Resubmitted on: _____ By: _____

MAY-23-2001 20:47

MUSCO

7327519115 P.02/02



Drum Point Rd Rec Area	
Representative: Dan Shalloo	Project #: 54063197

(Drawing not to scale)

NOTE:

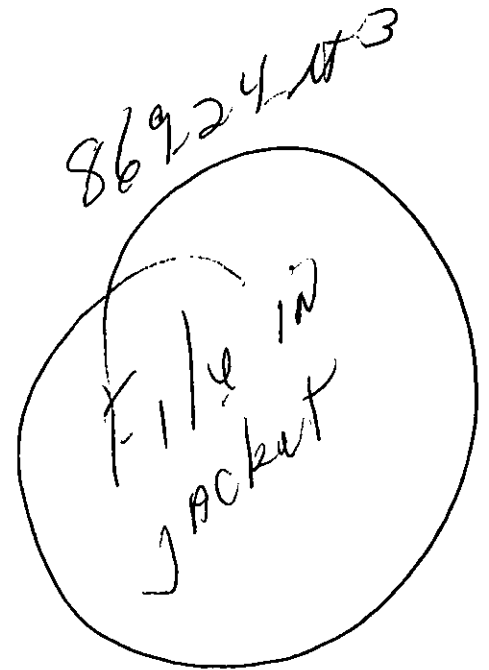
Foundation design based on assumed soil conditions of Class 5 Material per UBC 1997 Edition, Volume 2, Chapter 18, Division 1, Section 1806.8, Table 18-1-A.

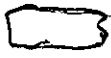
Concrete backfill must have a minimum compressive strength of 3000 psi after 28 days.

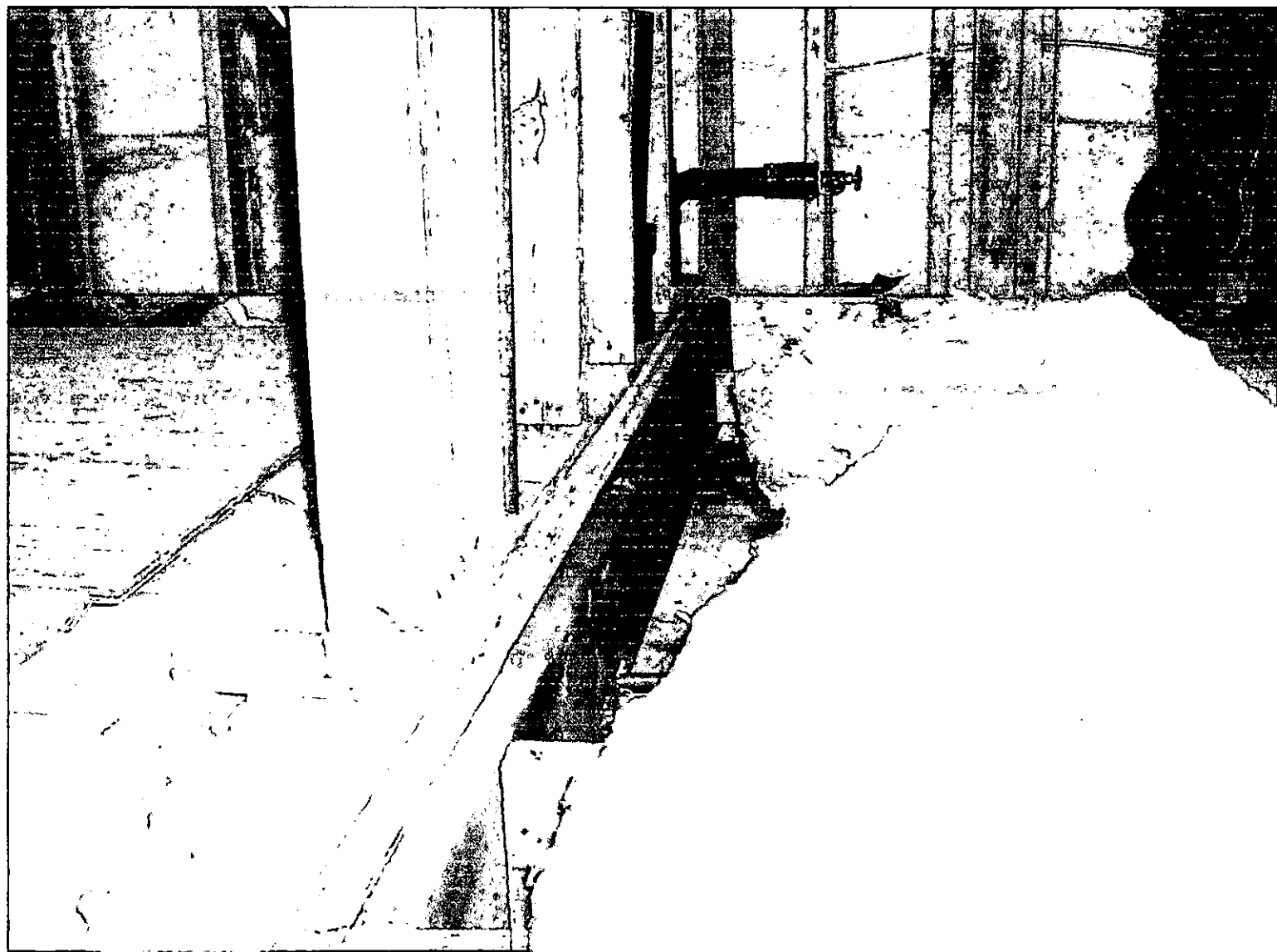
Pole Location	# Fixtures per Pole	Base Weight	Hole Diameter	Backfill Quantity	Burial Depth	Dressed Pole Weight*
S5	10	3810	30"	1.8 yds	14'	2502

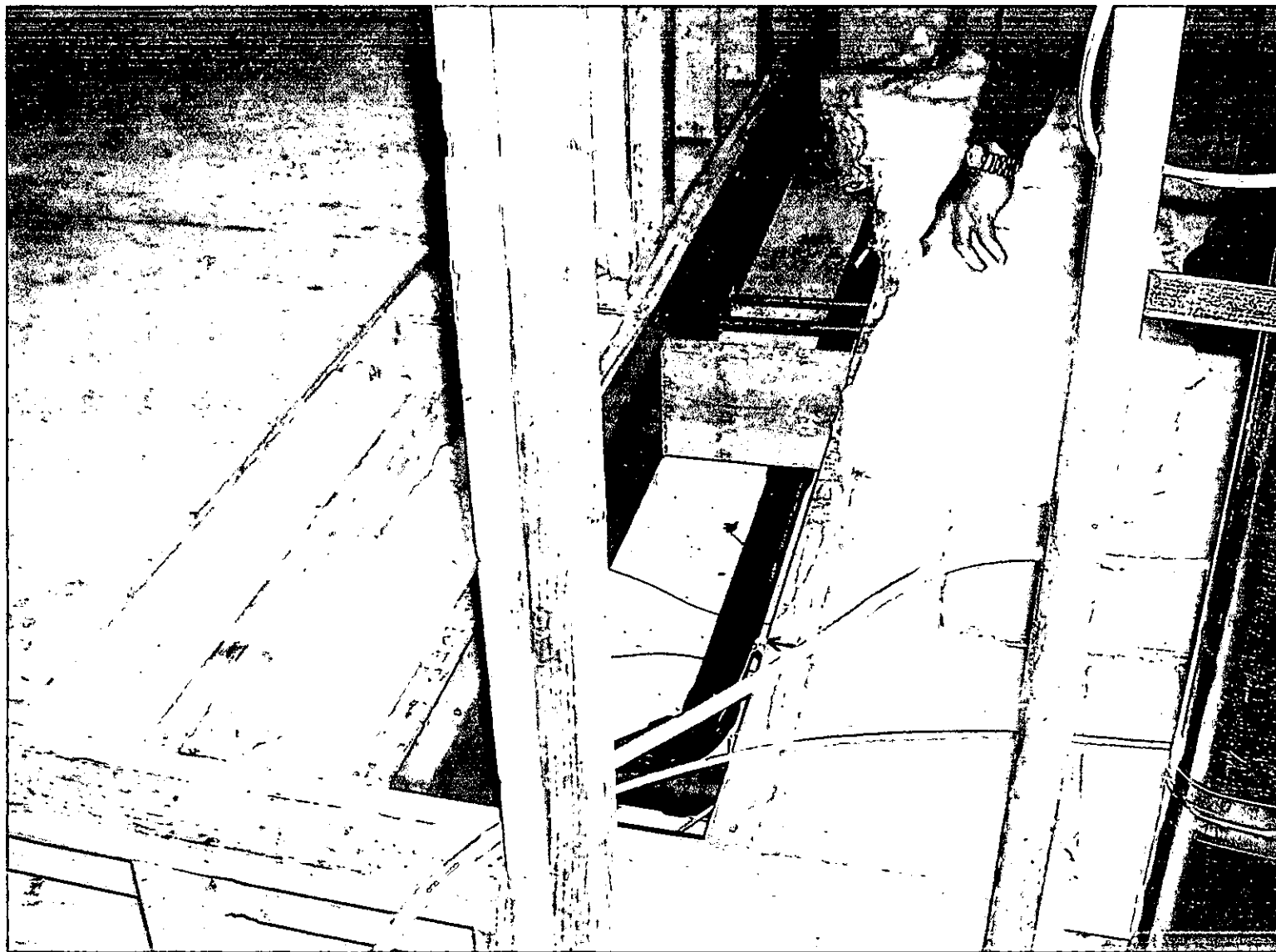
*Weight of steel pole and fixtures.

DIGITAL PHOTOS
OF WORK DONE
UNDER FLOOR
PER INSPECTORS
COMMENTS AT
OPEN FLOOR
INSPECTION

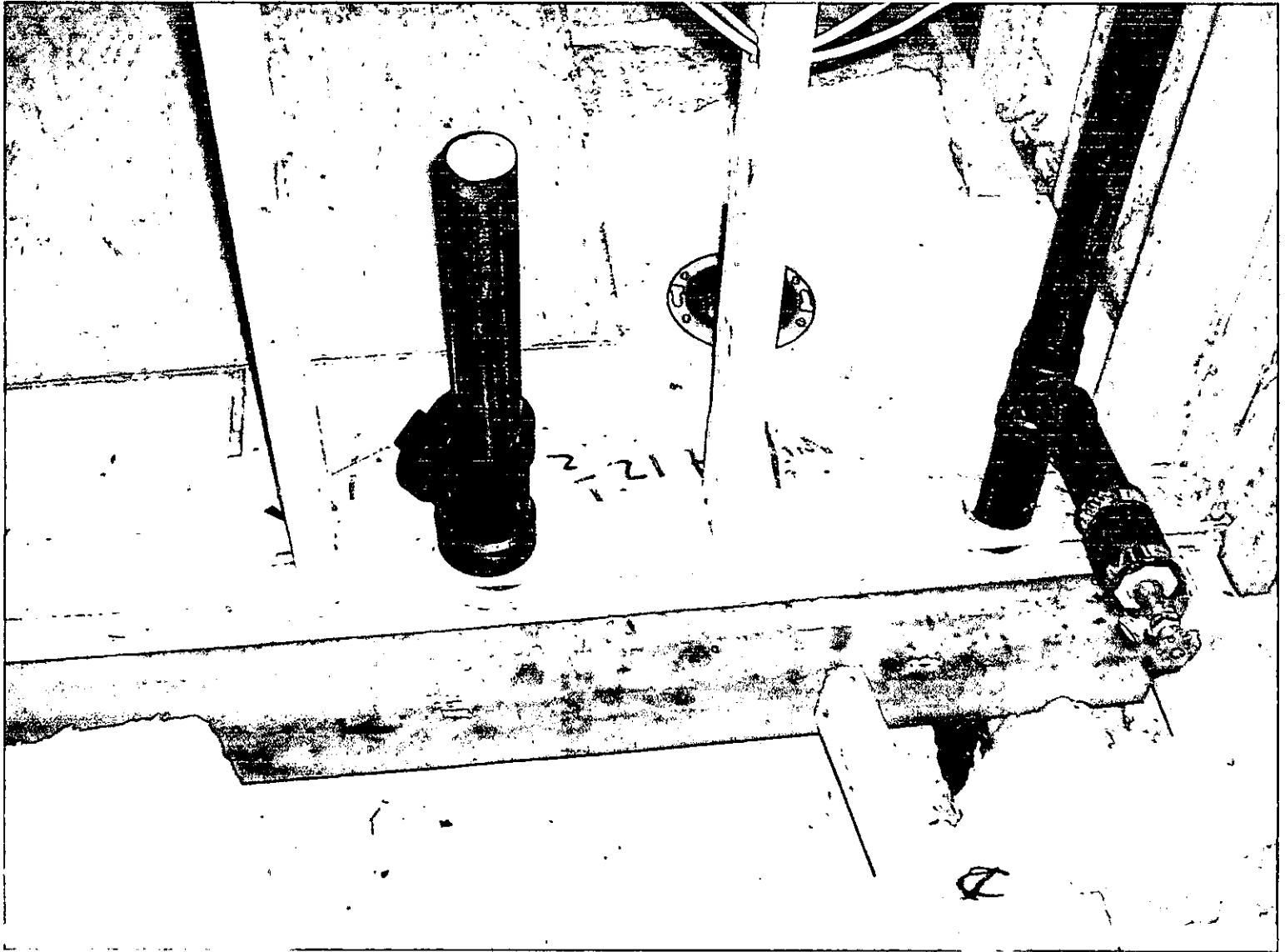


From Homeowner at 
42 Harmony Lane.
per your Request













BID FORM

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

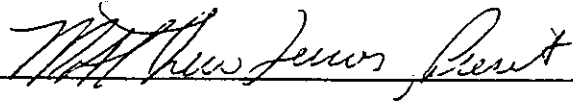
BIDDER: Lucas Electric Co., Inc.
1381 Rt. 130
Windsor, NJ 08561
(Enter Bidder's legal name and address)

1. Documents. Bidder understands and accepts all provisions of the Contract Documents.
2. Bid Form Supplements. Bidder encloses herewith the following executed Bid Form Supplements: Bid Guarantee, Consent of Surety, Statement of Corporate Ownership, List of Subcontractors, Acknowledgement of Receipt of Changes to Contract Documents, Non-Collusion Affidavit, Contractor's Experience Statement and Bid Document Submission Checklist.
3. Schedule of Prices. Bidder encloses herewith a completed Schedule of Prices in accordance with the Instructions to Bidders Section of this document.

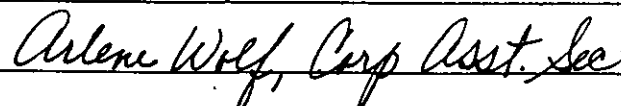
4. Communications. Bidder requests that communications regarding this Bid be addressed as follows:

Name: Matthew Lucas
Address: 1381 Rt. 130 Windsor, NJ 08561
Telephone: 609-448-5218
Fax: 609-448-8612

5. Signature. Bidder executes this Bid by signature of the person or persons authorized to sign for the Bidder.

SIGNATURE: 

Name (printed): Matthew Lucas, President

SIGNATURE: 

Name (printed): Arlene Wolf, Corp. Asst. Secretary

Date: May 18, 2001

SCHEDULE OF PRICES

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

Bidder proposes to complete the Work in accordance with the Contract Documents at the prices set forth in this Schedule of Prices.

<u>No.</u>	<u>Title and Pay Basis</u>	<u>Amount</u>
------------	----------------------------	---------------

PAY ITEMS

BASE BID – WINDWARD BEACH ENTRANCE AREA LIGHTING

All Base Bid Pay Items will be included in the Work. Bidder shall include all Base Bid Pay Items in the Base Bid Amount.

Section 1 – General Work

1A.	GENERAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING, LUMP SUM WORK at One Thousand.....Dollars and no.....Cents per LUMP SUM equals:	\$1,000 . 00
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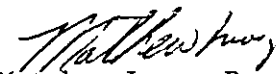
Section 2 – Decorative Site Lighting

2A.	WINDWARD BEACH – ENTRANCE AREA LIGHTING, LUMP SUM WORK at Thirty Nine Hundred.....Dollars and No.....Cents per LUMP SUM equals:	\$3,900 . 00
-----	--	--------------

Section 4 – Electrical Work

4A.	ELECTRICAL WORK - WINDWARD BEACH ENTRANCE AREA LIGHTING, LUMP SUM WORK at Ten Thousand Five Hundred.....Dollars and No.....Cents per LUMP SUM equals:	\$10,500.00
-----	--	-------------

Name of Bidder: Lucas Electric Co. Inc00410-10

Signature of Bidder:  Matthew Lucas, President

No.

Title and Pay Basis

Amount

PAY ITEMS

BASE BID – WINDWARD BEACH ENTRANCE AREA LIGHTING

Section 6 – Site Restoration

6A.

SITE RESTORATION – WINDWARD BEACH ENTRANCE
AREA LIGHTING, LUMP SUM WORK at

Three Thousand.....Dollars and

No.....Cents per

LUMP SUM equals:

\$ 3000. 00

TOTAL BASE BID AMOUNT:
(for determining Bid Security)

Eighteen Thousand four Hundred.....Dollars and

No.....Cents

\$ 18,400. 00

Note to Bidder: The apparent lowest responsible Bidders will be determined by Owner from the sum of prices Bid for all Base Bid Pay Items plus, if applicable, those Optional Pay Items and Alternate Pay Items selected by Owner.

Name of Bidder: Lucas Electric Co. 00410-11

Signature of Bidder: Matthew Lucas, President

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A1 – WINDWARD BEACH SIDEWALK LIGHTING

All Alternate A1 Pay Items will be included in the Work. Bidder shall include all Alternate A1 Pay Items in the Alternate A1 Bid Amount.

Section 1 – General Work

1B(A1). GENERAL WORK – WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....~~Thirty-five Hundred~~.....Dollars and
.....NO.....Cents per
LUMP SUM equals:
\$ 3,500 . 00

Section 2 – Decorative Site Lighting

2B(A1). WINDWARD BEACH – SIDEWALK LIGHTING, LUMP SUM
WORK at
.....~~Twenty-eight Thousand~~.....Dollars and
.....No.....Cents per
LUMP SUM equals:
\$ 28,000 . 00

Section 4 – Electrical Work

4B(A1). ELECTRICAL WORK - WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....~~Nine Thousand~~.....Dollars and
.....NO.....Cents per
LUMP SUM equals:
\$ 9,000 . 00

Section 6 – Site Restoration

6B(A1). SITE RESTORATION – WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....~~Three Thousand~~.....Dollars and
.....NO.....Cents per
LUMP SUM equals:
\$ 3,000 . 00

TOTAL ALTERNATE A1 BID AMOUNT:

~~Forty-three Thousand Five Hundred~~.....Dollars and
.....NO.....Cents

\$ 43,500.00

Name of Bidder: Lucas Elec.Co., Inc. 00410-12

Signature of Bidder: Matthew Lucas, President

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A2 – DRUM POINT RECREATION COMPLEX LIGHTING

All Alternate A2 Pay Items will be included in the Work. Bidder shall include all Alternate A2 Pay Items in the Alternate A2 Bid Amount.

Section 1 – General Work

1C(A2). GENERAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING, LUMP SUM WORK at
One Thousand Six Hundred.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 1,600 . 00

Section 3 – Sports Lighting

3A(A2). DRUM POINT RECREATION COMPLEX LIGHTING, LUMP SUM WORK at
Twenty Thousand.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 20,000 . 00

Section 4 – Electrical Work

4C(A2). ELECTRICAL WORK - DRUM POINT RECREATION COMPLEX LIGHTING, LUMP SUM WORK at
Twenty-two Thousand.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 22,000 . 00

Section 6 – Site Restoration

6C(A2). SITE RESTORATION – DRUM POINT RECREATION COMPLEX LIGHTING, LUMP SUM WORK at
Twelve Hundred.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 1,200 . 00

TOTAL ALTERNATE A2 BID AMOUNT:

Forty-four Thousand Eight Hundred.....Dollars and
.....NO.....Cents

\$ 44,800 . 00

Name of Bidder: Lucas Electric Co. 00410-13

Signature of Bidder: Matthew Lucas, President

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A3 - VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING

All Alternate A3 Pay Items will be included in the Work. Bidder shall include all Alternate A3 Pay Items in the Alternate A3 Bid Amount.

Section 1 - General Work

1D(A3). GENERAL WORK - VETERANS MEMORIAL MIDDLE
SCHOOL LIGHTING, LUMP SUM WORK at
.....One Thousand Eight Hundred.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 1,800.00

Section 3 - Sports Lighting

3B(A3). VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING,
LUMP SUM WORK at
.....~~Forty-one~~ Thousand.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 41,000.00

Section 4 - Electrical Work

4D(A3). VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING,
LUMP SUM WORK at
.....~~Twelve Thousand Two Hundred~~.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 12,200.00

Section 6 - Site Restoration

6D(A3). SITE RESTORATION - VETERANS MEMORIAL MIDDLE
SCHOOL LIGHTING, LUMP SUM WORK at
.....One Thousand Two Hundred.....Dollars and
.....NO.....Cents per
LUMP SUM equals:

\$ 1,200.00

TOTAL ALTERNATE A3 BID AMOUNT:

.....Fifty-six Thousand Two Hundred.....Dollars and
.....NO.....Cents

\$ 56,200.00

Name of Bidder: Lucas Elec.Co., Inc. 00410-14

Signature of Bidder: Matthew Lucas, President

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A4 – WINDWARD BEACH SIDEWALK

All Alternate A4 Pay Items will be included in the Work. Bidder shall include all Alternate A4 Pay Items in the Alternate A4 Bid Amount.

Section 5 – Concrete Work

5A(A4). CONCRETE SIDEWALK, 4" THICK, UNIT PRICE WORK at
.....Six.....Dollars and
.....Seventy-five.....Cents per
SQUARE FOOT for an estimated
5,350 SQUARE FEET equals:
\$ 36,112.50

5B(A4). CONCRETE CURB, UNIT PRICE WORK at
.....Fifteen.....Dollars and
.....NO.....Cents per
LINEAR FOOT for an estimated
100 LINEAR FEET equals:
\$ 1,500.00

Section 6 – Restoration

6E(A4). TOPSOIL, FERTILIZE & SEED, UNIT PRICE WORK at
.....Three.....Dollars and
.....Fifty.....Cents per
SQUARE YARD for an estimated
480 SQUARE YARDS equals:
\$ 1,680.00

TOTAL ALTERNATE A4 BID AMOUNT:

Thirty-nine Thousand Two Hundred Ninety-two....Dollars and
.....Fifty.....Cents
\$ 39,292.50

Note to Bidder: The apparent lowest responsible Bidders will be determined by Owner from the sum of prices Bid for all Base Bid Pay Items plus, if applicable, those Optional Pay Items and Alternate Pay Items selected by Owner. END OF SCHEDULE

Name of Bidder: Lucas Elec., Inc. 00410-15.

Signature of Bidder: Matthew Lucas, President

BID FORM SUPPLEMENT A
BID GUARANTEE
(As Required by N.J.S.A. 40A: 11-21)

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

BIDDER'S LEGAL NAME: Lucas Electric Co., Inc.

INSTRUCTIONS:

(1) Bidder must calculate Bid Guarantee at ten (10) percent of the Total Bid Amount shown by Bidder in the Schedule of Prices. The maximum required Bid security shall be Twenty Thousand Dollars (\$20,000).

(2) Bidder must make Bid Guarantee payable to Owner either in the form of a certified check or Bid Bond issued by a surety authorized to do business in state where the work is to be performed.

(3) A Bid Bond must incorporate the following information and provisions:

Surety Name and Address
Owner (Same as in Invitation to Bid)
Work Title (Same as in Invitation to Bid)
Bidder (Same as in Bid Form)
Penal Sum (Amount as required in Contract Documents)
Default (According to Contract Documents)
Payment (According to Contract Documents)

(4) Bidder, and Surety when a Bid Bond is submitted, must understand and accept all provisions regarding forfeiture of Bid security as set forth in the Instructions to Bidders.

(5) Bidder must understand and accept that any departure in the required amount of Bid Guarantee from the amount calculated as specified in the Contract Documents, or any departure in the provisions incorporated in a Bid Bond from the provisions specified in the Contract Documents, shall be grounds for rejection of the Bid.

Bidder must check and initial one of the following:

 Bidder has affixed hereto a certified check.

 X Bidder has affixed hereto a Bid Bond.

BID FORM SUPPLEMENT B
CONSENT OF SURETY
(Pursuant to N.J.S.A. 40A: 11-22)

Selective Insurance Company of America

(Hereinafter "Surety").

Authorized to do business in state where work is to be performed, hereby agrees that if

Lucas Electric Co., Inc.

(Enter Bidder same as in Bid Form)

(Hereinafter "Bidder") is issued a Notice of Award by TOWNSHIP OF BRICK for PROPOSED SITE LIGHTING - VARIOUS LOCATIONS.

Surety will provide Bidder with a Construction Performance Bond and a Construction Payment Bond in the forms and in the amounts as required by the Contract Documents.

Dated:

5/16/01

BY:

Selective Insurance Company of America

Carmen Canchero

, Attorney-in-Fact

BID FORM SUPPLEMENT C
STATEMENT OF CORPORATE OWNERSHIP
(Pursuant to N.J.S.A. 52:25-24.2)

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

If Bidder is a proprietorship, check here _____ and do not complete this statement, which applies only to corporations and partnerships [N.J.S.A. 52:25-24.2].

Bidder hereby sets forth the names and addresses: (a) of all stockholders in the corporation or partnership submitting the Bid who own 10 percent or more of its stock of any class; or (b) of all individual partners in the partnership who own a 10% or greater interest therein. If one or more such stockholder or partner is itself a corporation or partnership, the stockholders holding 10 percent or more of that corporation's stock, or the individual partners owning 10 percent or greater interest in that partnership, as the case may be, shall also be listed.

NAME OF CORPORATION OR PARTNERSHIP: Lucas Electric Co., Inc.

Name: Matthew Lucas, President 100%

Address: 31 Allens Rd.

Hightstown, NJ 98520

Name: _____

Address: _____

Name: _____

Address: _____

If additional sheets are necessary, complete the following: _____ additional sheets are attached hereto and made a part of this Statement of Corporate Ownership.

**BID FORM SUPPLEMENT D
LIST OF SUBCONTRACTORS**

Requested by
THE LOCAL PUBLIC CONTRACT LAW
N.J.S.A. 10A:11-16
And P.L. 1997, Chapter 408

TOWNSHIP OF BRICK

BID OPENING DATE Friday, May 18, 2001

Job No: 53145000

Work Title: **PROPOSED SITE LIGHTING - VARIOUS LOCATIONS**

CONTRACTOR: Lucas Electric Co., Inc.

Name Under Which Subcontractor Licensed	License No.	N.J. Dept. of Labor Certificate No.	Address of Office Mill or Shop	Specific Description of Subcontract	Percent of Contract	Price Quote to be Awarded to Subcontractor
N/A No Subs						

I, _____, (NAME OF CONTRACTOR) _____, certify that the price quotes submitted above will be awarded to each Subcontractor should I be awarded the Contract.

NAME: _____

ADDRESS: _____

SIGNED BY: _____

(5)

BID FORM SUPPLEMENT E
ACKNOWLEDGEMENT OF RECEIPT OF CHANGES TO CONTRACT DOCUMENTS

TOWNSHIP OF BRICK

Work Title: **PROPOSED SITE LIGHTING - VARIOUS LOCATIONS**

Job No: 53145000

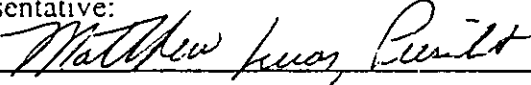
Pursuant to N.J.A.C. 40A:11-23.1a., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidder shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received
N/A		

Acknowledgement by Bidder:

Name of Bidder: Lucas Electric Co., Inc.

By Authorized Representative:

Signature: 

Printed Name and Title: Matthew Lucas, President

DATE: 5/18/01

BID FORM SUPPLEMENT F
NON-COLLUSION AFFIDAVIT

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

The undersigned, of full age, being duly sworn according to law on my oath depose and say: that I am of the firm making the Bid; that I executed the Bid with full authority to do so; that Bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the Work; and that all statements contained in the Bid and in this affidavit are true and correct, and made with full knowledge that Owner relies upon the truth of the statements contained in the Bid and in the statements contained in this affidavit in an award of a contract for the Work.

I further warrant that no person or selling agency has been employed or retained to solicit or secure a contract upon an agreement or understanding for a commission, percentage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Bidder in accordance with N.J.S.A. 52:34-15.

Signature: _____

Matthew Lucas, President

Name (printed): Matthew Lucas, President

Bidder (printed): Lucas Electric Co., Inc.

Subscribed and sworn to
before me this 18th day
of May, 2001.

Arlene Wolf
NOTARY PUBLIC of NJ

My commission expires 8/26, 2003

BID FORM SUPPLEMENT G
CONTRACTOR'S EXPERIENCE STATEMENT

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

BIDDER'S LEGAL NAME: Lucas Electric Co., Inc.

The bidder is requested to state below what work of a similar character to that included in the proposed Contract he has done, and give references that will enable the Owner to judge of his experience, skill and business standing:

Bidders and proposed Subcontractors may be required to submit additional information regarding their respective financial condition prior to the award of the contracts.

See Attached

(Add supplementary pages if necessary)

BID FORM SUPPLEMENT H
BID DOCUMENT SUBMISSION CHECKLIST

TOWNSHIP OF BRICK

**Work Title: PROPOSED SITE
LIGHTING - VARIOUS LOCATIONS**

Job No: 53145000

- A. Failure to submit the following documents is a mandatory cause for the bid to be rejected**
(N.J.S.A. 40A:11-23.2)

Required With Submission of Bid (Owner's checkmarks)	Initial Each Item Submitted with Bid (Bidder's initials)
☒ A Bid Guarantee as required by <u>N.J.S.A. 40A:11-21</u> (Bid Form Supplement A)	<i>aw</i>
☒ A Certificate from a Surety Company, pursuant to <u>N.J.S.A. 40A:11-22</u> (Bid Form Supplement B)	<i>aw</i>
☒ A Statement of Corporate Ownership, pursuant to <u>N.J.S.A. 52:25-24.2</u> (Bid Form Supplement C)	<i>aw</i>
☒ A List of Subcontractors as required by <u>N.J.S.A. 40A:11-16</u> (Bid Form Supplement D)	<i>aw</i>
☒ If applicable, bidder's acknowledgement of receipt of any notice(s) or revision(s) or addenda to an advertisement, specifications or bid document(s) (Bid Form Supplement E)	<i>aw</i>
☐ Copies of NJDOL Contractor Registration Certificates for the prime contractor and all subcontractors pursuant to <u>N.J.S.A. 34:11-56.43</u>	<i>aw</i>

- B. Failure to submit the following documents and/or requirements may be a cause for the bid to be rejected.**
(N.J.S.A. 40A:11-23.1b.)

Required with Submission of Bid (Owner's checkmarks)	Initial Each Item Submitted with Bid (Bidder's initials)	Required with Submission of Bid (Owner's checkmarks)	Initial Each Item Submitted with Bid (Bidder's initials)
☒ Submission of a Non-Collusion Affidavit (this form must be Notarized) (Bid Form Supplement F)	<i>aw</i>	☒ TOTAL BID AMOUNT stated in figures and in writing, as per the Instructions To Bidders section of this document.	<i>aw</i>
☒ Contractor's Experience Statement (Bid Form Supplement G)	<i>aw</i>	☒ All forms signed, initialed, certified, and notarized as required	<i>aw</i>
☒ All unit prices submitted and extensions properly computed	<i>aw</i>		

- C. SIGNATURE: The undersigned hereby acknowledges and has submitted the above listed requirements.**

Name of Bidder: Lucas Electric Co., Inc.

By Authorized Representative:
Signature: *Matthew Lucas, President*

Print Name and Title: Matthew Lucas, President

Date: 5/18/01



40 Wantage Avenue
Branchville, New Jersey 07890
973-948-3000

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That Lucas Electric Co., Inc. (hereinafter called the Principal) as Principal, and the SELECTIVE INSURANCE COMPANY OF AMERICA, a corporation created and existing under the laws of the State of New Jersey, with its principal office in Branchville, New Jersey (hereinafter called the Surety), as Surety, are held and firmly bound unto the Township of Brick (hereinafter called the Obligee) in the full and just sum of 10% of amount bid not to exceed \$20,000.00 good and lawful money of the United States of America, to the payments of which sum money well and truly to be made, the said Principal and Surety bind themselves, their and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this 16th day of May A.D. 2001.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, if the Obligee shall make any award within 60 days to the Principal for Site Lighting according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the faithful performance thereof with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure so to do, pay to the Obligee the damages which the Obligee may suffer by reason of such failure, not exceeding the penalty of this bond, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect.

In Testimony Whereof, the Principal and Surety have caused these presents to be duly signed and sealed.

WITNESS:

Lucas Electric Co., Inc.

BY: Matthew Lucas, President (SEAL)

(If Individual or Firm)

(SEAL)

(SEAL)

Principal

ATTEST:

Arlene Wolf, Corp. Asst. Sec.
(If Corporation)

SELECTIVE INSURANCE COMPANY OF AMERICA

By: Carmen Cashin
Attorney-in-Fact

Selective Insurance Company of America
40 Wantage Avenue
Branchville, New Jersey 07890
973-948-3000

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the Selective Insurance Company of America, a New Jersey corporation having its principal office in Branchville, State of New Jersey, pursuant to Article VII, Section 13 of the By-Laws of said Company, to wit:

"The Chairman of the Board, President, any Vice Presidents or the Secretary may, from time to time, appoint attorneys in fact, and agents to act for and on behalf of the Company and they may give such appointee such authority, as his/her certificate of authority may prescribe, to sign with the Company's name and seal with the Company's seal, bonds, recognizances, contracts of indemnity and other writings obligatory in the nature of a bond, recognizance or conditional undertaking, and any of said Officers may, at any time, remove any such appointee and revoke the power and authority given him/her.

does hereby make, constitute and appoint **WILLIAM M. RUE, ELLEN B. SAPERSTEIN, ELIZABETH A. ALLEN, MARYANNE V. BONIS, CARMEN CAVALIERE**

its true and lawful Attorney-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed, bonds, undertakings, recognizances, contracts of indemnity, or other writings obligatory in the nature of a bond subject to the following limitations: **NO ONE BOND TO EXCEED FOUR MILLION DOLLARS (\$4,000,000.00)**

and to bind the Selective Insurance Company of America thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Selective Insurance Company of America, and all the acts of said Attorney are hereby ratified and confirmed.

IN WITNESS WHEREOF, the Selective Insurance Company of America has caused these presents to be signed by its **Senior Vice President** and its corporate seal to the hereto affixed this **28TH** day of **FEBRUARY**, **2001**

Selective Insurance Company of America
BY: Antonio C. Albanese
Antonio C. Albanese, Senior Vice President
1926

State of New Jersey
County of Sussex

On this **28TH** day of **FEBRUARY**, **2001** before the subscriber a Notary Public of the State of New Jersey in and for the County of Sussex duly commissioned and qualified, came Antonio C. Albanese of the Selective Insurance Company of America, to me personally known to be the officer described herein, and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposed and said that he is an officer of said Company aforesaid; that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the Company; that Article VII, Section 13 of the By-Laws of said Company is now in force.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at Branchville, New Jersey this **28TH** day of **FEBRUARY**, **2001** **LORRAINE A. PETERSEN**

NOTARY PUBLIC OF NEW JERSEY
COMMISSION EXPIRES AUG. 30, 2003

The power of attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of Selective Insurance Company of America at a meeting duly held and attested on the 6th of February 1987, to wit:

"RESOLVED, the Board of Directors of Selective Insurance Company of America authorizes and approves the use of a facsimile corporate seal, facsimile signatures of corporate officers and notarial acknowledgements thereof on powers of attorney for the execution of bonds, recognizances, contracts of indemnity and other writings obligatory in the nature of a bond, recognizance or conditional undertaking....."

I, Patricia A. Fulkrod, Assistant Secretary of the Selective Insurance Company of America, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Company which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company at Branchville, New Jersey this **16th** day of **MAY**, **2001**.

Patricia A. Fulkrod
Assistant Secretary

Selective Insurance Company of America
Selective Way Insurance Company
40 Wantage Avenue
Branchville, New Jersey 07890
973-948-3000

STATEMENT OF FINANCIAL CONDITION

I hereby certify that the following statement of Selective Insurance Company of America is true as taken from the records of said Company as of December 31, 2000.

ADMITTED ASSETS

Bonds	\$ 640,571
Preferred stocks-at convention values	96,888
Common stocks-at convention values	138,684
Subsidiary common stock-at convention values	28,702
Short-term investments	60,119
Mortgage loans on real estate (including collateral loans)	77
Other invested assets	13,246
Interest and dividends due or accrued	11,758
Premiums receivable	165,538
Other admitted assets	<3,103>

(in thousands)

\$1,152,480

LIABILITIES AND SURPLUS

Reserve for losses and loss expenses	\$ 608,081
Reserve for unearned premiums	223,900
Provision for unauthorized reinsurance	835
Excess of statutory reserves over case basis reserves	604
Contingent commissions	6,005
Other accrued expenses	14,628
Other Liabilities	<u>47,380</u>
Total Liabilities	901,433
Surplus as regards policyholders	<u>251,047</u>

(in thousands)

\$1,152,480

I further certify that the following is a true and exact excerpt from Article VII, Section 13 of the By-Laws of the Selective Insurance Company of America which is still valid and existing.

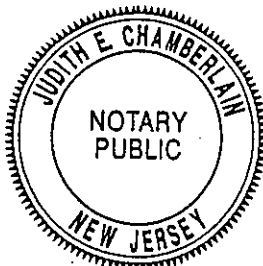
"The Chairman of the Board, President, any Vice Presidents or the Secretary may, from time to time, appoint attorneys in fact, and agents to act for and on behalf of the Company and they may give such appointee such authority, as his/her certificate of authority may prescribe, to sign with the Company's name and seal with the Company's seal, bonds, recognizances, contracts of indemnity and other writing obligatory in the nature of a bond, recognizance or conditional undertaking, and any of said Officers may, at any time, remove any such appointee and revoke the power and authority given him/her".

IN WITNESS WHEREOF, I hereunto subscribe my name and affix the seal of said Company, this 28th day of February, 2001.

Shirley D. Laurel

Executive Vice President and General Counsel
Subscribed and Sworn to me on this 28th day of February, 2001.

Judith E. Chamberlain



Notary Public
My Commission Expires October 17, 2003.



LUCAS ELECTRIC COMPANY, INC.

1381 Route 130
Windsor, New Jersey 08561
NJ LIC. 9758
609-448-5218 Fax 609-448-8612

A Bibliographic list of our Employees:

Mr. Matthew Lucas – President – 20+ years Electrical/Construction Experience, Estimating, Construction Foreman Supervision, Project Management; of numerous Commercial, Industrial and University projects in excess of 5 million dollars, such as Feeders and Power Distribution, Power Factors, 3-Phase Motor Starters and Controls, Phase Converters, Emergency Generators, Switch Gear, Pump Stations, Arena & Stadium Lighting, Sewage Treatment Plants, Restaurants/Kitchens, Shopping Centers, Schools.

NJ Electrical Lic. # 9758

Mr. Carlton Golden – Operation Manager – 20+ years Construction/Maintenance Experience, Direct Control over job management, Scheduling permits & approval process, Customer and Architect relations and all functions as associated with Electrical Contracting.

Rider University – NJ Engineer #B-104504

Mr. Ross Russell – Project Manager, Estimating – 20+ years Electrical/Construction Experience. Supervisor for Estimating Department, Material scheduling, Contract Facilities Maintenance, Interface with Project foreman, and all functions associated with Electrical & HVAC Layout & Installation.

PA Licensed, Instructor State of Pennsylvania, County of Bucks and Montgomery

Mr. Charles LaManna, Sr. – Project Manager – 20+ years Electrical Experience, Supervisor of all Commercial and Industrial projects, Co-ordinates Job Foreman, Estimating & Design Build Projects, Emergency Generator Project Manager, Project Layout Office & Industrial Complex, Installation of Substation 10,000kVA transformers, Buss ducts, Harmonic Distortions, and use of all test equipment for trouble shooting.

NJ Electrical Lic. #6565

Mr. Frederick Septak – Project Manager – 20+ years Electrical Experience, Supervisor for Project Layout and management. Layout of office and industrial electrical projects. Oversee installation of medium voltage cables up to 12,500 volts, and power feeder distribution. Transformer Installation, Site and Athletic Lighting Installations.

NJ Electrical Lic. #6682

Mr. Thomas Krakosky - Electrician Foreman - 20+ years Electrical Experience, in new construction of Hospitals; X-ray and Operating room equipment installation, Fire alarm, Switch gear, Phase converters, HV Installation, Splices and testing, 3 Phase Motor Starters & Controls, Emergency Generators, Feeders and Power Distribution, Installation of HV duct banks, University Campus Power Distribution.

NJ Electrical Lic. # 9494

Mr. Tony D'Angelo – Electrician Foreman - 20+ years Electrical Experience in renovations and remodeling from specifications blueprints, and drawing, Stage & Theatrical Lighting, University and College Lighting, 3 Phase Motor troubleshooting and Installation. Starters & Controls, Stress Cones, Fire alarms, Fiber Optic & CAT 5 Computer wiring. Transformer Installations, HV Feeders Splices and Installation.

NJ Electrical Lic. #

Mr. Frank Zsnek - Electrician Foreman - 18+ years Electrical Experience, Involved in construction of Commercial and industrial office and warehouse complexes, Athletic Site lighting, Power distribution system, 3 Phase motor and controls, Explosion-proof fixture and conduit Installation, HV Voltage Switching and Feeder Installation Computer CAT 5 wiring, Fire alarm, Lighting contactors, Pump Stations.
NJ Electrical Lic. # 11520

Mr. Herb Fritz - Electrician Foreman - 20+ years Electrical Experience, Involved in Airport terminal and runway lighting, Institution and Commercial sites, Athletic & Stadium Lighting, HV splicing, Installation and testing 3 Phase Motor and Control wiring, Phase converters, Emergency Generator installations, Switchgear, Low voltage control wiring, Lighting Contactors, Explosion and Hazardous location installation.
NJ Electrical Lic # 6962

Mr. Art Woodruff, Jr. - Journeyman Electrician - 30+ years Electrical Experience in construction and renovation of commercial industrial facilities, Warehouses, Airport hangers, Power Feeders & Distribution Systems, Buss Ducts, 3 Phase motor wiring and controls, Lighting Contactors, Troubleshooting, pipe and underground cable locating, Fault locating, Site and Athletic lighting installation & repairs.
NJ Electrical Lic. #

Mr. Joe Charyk - Journeyman Electrician - 15+ years Electrical Experience in traffic Light Signalization, feeder & power distribution, retrofit energy saving fixtures, site lighting, motor controls, 3 Phase motors and control wiring.

Mr. Tim Murphy - Electrical Foreman - 20+ years Electrical Experience in all phases of new and renovated commercial and industrial facility wiring, Installation of HV Feeders, splicing and testing. College and University power distribution 3 Phase motor installation & troubleshooting. Fire alarms, Lighting Contactors, Site and Athletic Lighting installation & repairs. NJ Electrical Lic. # 6977

Mr. Michael D'Angelo - Electrical Foreman - 15+ years Electrical Experience in new construction of Racetrack, Industrial & Office Complex's, Athletic and Site Lighting, Emergency Generators, University and College Construction and Renovation. Switch gear, Feeders and Power distribution system, 3 Phase motor controls, Low voltage Fire alarms.
NJ Electrical Lic. # 11927

Mr. Henry Lucas, Fleet Coordinator, 50+ years Electrical Experience

Mr. John Swagzdis, 12+ years Electrical Experience

Mr. John Souders, 18+ years Equipment Operator Experience

Mr. John Miick, 12+ years Mechanic, Equipment Operator Experience

Mr. Mark Vanselous, 15+ years Mechanic, Equipment Operator Experience

Mr. Roy Cook, 12+ years Equipment Operator Experience

Mr. Art Woodruff, 5+ years Equipment Operator

Mr. Michael Pitman, 5+ years Electric Experience

LUCAS ELECTRIC COMPANY, INC.

1381 Route 130

Windsor, New Jersey 08561

NJ LIC. 9758

609-448-5218

Fax 609-448-8612

Re.: Emergency Phone Numbers

The list of names and numbers below are for your use during regular business hours and off hours in the event of an emergency involving the project.

Matt Lucas - President

Office 609-448-5218

Cell 609-731-2858

Home 609-426-0894

Carl Golden - Operation Manager

Office 609-586-6808

Beeper 800-662-2951

Cell 609-462-3298

Home 732-303-1998

Ross Russell - Estimate Manager

Office 609-586-6808

Beeper 800-833-6513

Cell 609-731-2858

Home 215-781-0609

Fred Septak - Project Manager

Office 609-448-5412

Beeper 800-870-5085

Cell 609-731-5091

Home 609-443-6420

Henry Lucas

Office 609-448-5844

Home 609-443-6471

LUCAS ELECTRIC COMPANY, INC.
1381 ROUTE 130 WINDSOR, NEW JERSEY 08561 NJ LIC.# 9758
Phone (609) 448-5218 Fax (609) 448-8612

PROJECTS

<i>PENNNATIONAL RACECOURSE</i> Harrisburg, PA. Mr. Robert Valvano, Musco Lighting Northeast Region; (732) 458-1111 Installation of Lighting & Wiring	\$500,000.00
<i>MIRY RUN COUNTRY CLUB</i> Robbinsville, NJ Mr. John Dermody, DY Consultants; (516) 561-6783 Trenton-Robbinsville, Airport Lighting	\$250,000.00
<i>OCEAN TOWNSHIP</i> Fireman Park Athletic Complex; Ocean, NJ. Mr. Robert Handwerker, Project Engineer Schoor & DePalma (609) 577-9000 Complete Construction of New Athletic Complex, Fields, Lighting, Fencing, Scoreboards, etc.	\$500,000.00
<i>RAMSEY LITTLE LEAGUE</i> MacFarren Field; Ramsey, NJ Mr. Robert Roller, President; (201) 575-3647 Athletic Field Lighting	\$58,000.00
<i>SKYMANOR AIRPORT</i> Pittstown, NJ Mr. John Dermody, DY Consultants; (516) 561-6783 Airport Lighting	\$250,000.00
<i>AT&T CORPORATION</i> 200 Laurel Avenue, Middletown, NJ Mr. Rich Millward, Facilities; (732) 615-2000 Installation of Parking Lot Gates, Loop Detectors & Ballards	\$200,000.00
<i>NAVEL WEAPON STATION</i> Route 34, Colts Neck, NJ Mr. Dan Zari; (732) 866-2000 ext.2046 Recreation Area Installation of 75 kVA Padmount Transformer, with 95 KV feeder Installation, Splicing and Testing	\$200,000.00
<i>McGraw Hill, Inc.</i> Princeton-Hightstown Road, Hightstown, NJ Mr. Frederick A. Septak, Project Manager; (609) 426-5489 Replacement of 15 KV Lead Shielded High Voltage Cables Including Switchgear and Transformer	\$254,000.00

MILLERSVILLE UNIVERSITY

\$ 259,370.00

Physical Plant Department

P.O. Box 1002, Millersville, PA. 17551

Mr. Dennis Coleman; (717) 872-3011

Athletic Complex Installation of 500 kVA Transformer with 32,000 Primary, Splicing and Testing

NOTHAMPTON AREA SCHOOL DISTRICT

\$ 105,977.00

1617 Laubach Avenue, Northampton, PA 18067

Mr. Carl Lerck, Facilities Dir.; (610) 262-7911

Retrofit Stadium Lighting, Switchgear & Lighting

MERRILL LYNCH, PIERCE, FENNER & SMITH, INC.

\$ 70,000.00

Corporate Real Estate

300 Davidson Avenue Somerset, NJ 08873

Mr. David Tock; (732) 627-6851

Disconnect & Replace 1000 amp Switchboard

COLLEGE OF NEW JERSEY

\$ 274,487.00

Cluster Housing Phase I & Phase II

CN 550, Hillwood Lake CNII, Ewing, NJ 08625

Mr. Brian Murray, Cambridge Construction; (908) 253-9500

Installation of Transformer, Panel Boards, Sub-Panel Feeders at Four Dorm Buildings.

Installation of Fire Alarm Systems, Security Systems and Devices

BIL-JIM CONSTRUCTION

\$ 386,639.00

Shurrock Road Project

577 South Hope Road Jackson, NJ 08527

Randy Johnson; (732) 370-9290

HERITAGE CONSTRUCTION

\$ 375,320.00

Fords Park Project

158 Linwood Plaza

Ft. Lee New Jersey 07024

Mr. Sid Kalman; (201) 461-3663

COLLEGE OF NEW JERSEY

\$1,432,000.00

Science Center Complex

CN 500, Hillwood Lake CNII, Ewing, NJ 08560

Mr. Brian Murray, Cambridge Construction; (908) 253-9500

[illegible]

09/21/00

LUCAS ELECTRIC VEHICLES

MAKE	TRUCK	YEAR	TYPE	LIC #	REGISTER WEIGHT	TOOL COLORS	SERIAL #	NEW USED	REG. INSP MONTH	YEAR PURCHASED
International	1	1985	Diesel Dump	AC702X	40,000	Brown	1HSLRTVL3FHA31190	Used	September	1995
Peterbilt	2	2000	Boom Truck with Crane	AF967B	80,000	White	1NPALBOX6YN463692	New		2000
Chevrolet	3	1996	Van	XZ72YL	10,000	Blue	1GCHG35KX7F104281	New	July	1996
Ford	4	1986	Diesel Utility	XY78KG	10,000	Red	1FDKF37136NA64078	Used	June	1995
Chevrolet	5	1987	Walk-in Van	XSJ85U	12,000	Yellow	1GCHP32M2H3311410	Used	March	1989
Ford	6	1977	Box	X84V27			2N71EVO6907	Used	April	1994
Freightliner FL80	8	1997	Diesel Crane/bucket	AF968B	33,000		1FV6HF664VH824272	New	September	1997
Chevrolet	10	1997	Reading Utility	X36N87	10,000	Purple	1GBGC24R2VE130516	New	Feb.	1997
Chevrolet	11	1997	Reading Utility	X45X77	10,000	Tan	1GBGC24R2VZ243701	New	July	1997
Ford	12	1985	Van	XG70MX	11,000	Green	1FTH534G8FHA55828	New	October	1985
Ford	13	1986	Pickup	X49K64			S1FTEX15N1GKB39029	Used	December	1997
Ford	15	1995	Pickup F-350	X2817A	10,000		1FTJW36F8SEA6B563	Used	March	2000
Freightliner FL80	16	2000	Diesel Crane/bucket		33,000		1FV6HFBA5YHG48515	New		2000
Chevrolet	17	1997	Sport Utility	UE-323V	8,000		1GNEK13R6V442970	New	August	1997
International	18	1997	Flatbed	AE892P	60,000		1HTSDADN9VH449178	Used	March	2000
Dodge	19	1995	Pickup	XAJ9439	9,000		3B7KF23C2SM142441	New	Feb	1995
John Deere	20	1983	Backhoe 310A	FY 91-2 IN Transit				Used	March	1991
Delta Friaxle Trailer	21	1989	Flatbed Trailer	T351RB	22,650		1E89FS2233J105425	Used	March	1991
Ingersoll Rand Air Compressor	22	1996	Diesel	In-Transit FY 91-5				New	March	1996
No Name Trailer Miller Tilt Top	23	1979 1969	Pickup Trailer	620TDJ			8377XXX	Used	March	1982
Ford- New Holland	24	1987	Backhoe DFB1111	FY 91-4 IN Transit			C774755	Used		1997
John Deere	25		Backhoe 310A	FY91 IN Transit				Used		

Miller Trailer	26	1955	Trailer	T52191	40,000					
Power Pole Trailer	27	1985	Sm.Pole Trailer	FY91 IN Transit				Used	March	1996
FDW	28	1953	Sm.Pole Trailer	TP806X			FWD465153	Used	March	1985
No Name Trailer	29	1963	Big Pole Trailer	215TPJ			001234X	Used	March	
Chevrolet	30	1998	Utility	X69-K86	9,000	Gray	1GBGC34R4WE204784	New	July	1998
Roller	31									
	32									
Vermeer 4750	33							Used		2000
Vermeer - Plow Trencher LM-42	34	1996	Plow Trencher					Used		1997
Kubota	35		Small Plow							
John Deere	36		Tractor 750Sm.							
Vermeer Trencher 8550	37		Trencher Large							
Trailer 6 Ton H.M. Triple Axle	38	1992	Trailer	T898VG			123456789 1TRN1968	Used	March	
Trailer Flatbed H.M. Alum Deck	39	1992	Trailer	T899VG IN Transit			T899V6 1TRN1967	Used	March	
Job Trailer 8' x 24'	40						EMS-2843 WMS2843			1996
Rock Saw Ditchwitch	51		R65					Used		1998
Miller Saw	52	1993	Jabsco					Used		1998
Case Trencher	54		360				JAF0072819	Used		1998
Dodge	55	1999	Quad Cab 4wd Pickup	YZ853P	7,000		1B7KF2361XJ550475	New	October	1999
Ford	56	1986	Digger Derrick	AE587J	70,000		1FDYL80U6GVA40720	Used	September	1999
Ford	57	1988	F-350	X73-L81	5,000		1FDJF37G6/JNA00155	Used	October	1999
Chevrolet	58	2000	Pick Up	X91-F85	8,600		1GCGC29UXYE130356	New	October	1999
Ford	59	1995	F150 Pick Up	X96-V83	5,000		1FTEX14N2SKC20180	Used	December	1999
Master Trailer	60	1996	Trailer	T-31G2H			4DFCH1620THOO0256	Used	March	1999
McCabe Trailer	61	1972	Small Pole Trailer				AD10136150	Used		1999
Yale Forklift	62		4000lb Fork Lift					Used		1999
Doolittle Trailer	63	2000	Utility Trailer	T21J7A	2,990		1DGRS1210YMO38741	New	March	2000

Certificate Number

61405

Expiration Date

4/10/2002

State of New Jersey



Department of Labor

Division of Wage and Hour Compliance

Public Works Contractor Registration Act

Pursuant to Public Law 1999 Chapter 238, the Public Works Contractor Registration Act, this certificate of registration, for purposes of bidding on and engaging in public work is issued to

Lucas Electric Company Incorporated

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor.

A handwritten signature in dark ink, appearing to read "Mark B. Boyd".

MARK B. BOYD, Commissioner
Department of Labor

A handwritten signature in dark ink, appearing to read "Martin Gartzman".

MARTIN GARTZMAN, Director
Division of Wage and Hour Compliance

NON TRANSFERABLE

TITLE PAGE

PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY

Issue Date: May, 2001

CONSTRUCTION CONTRACT DOCUMENTS

Title Page

Invitation to Bid

Instructions to Bidders

Bid Form*

Bid Form Supplements

A. Bid Guarantee*

B. Consent of Surety*

C. Statement of Corporate Ownership*

D. List of Subcontractors*

E. Acknowledgement of Receipt of Changes to Contract Documents*

F. Non-Collusion Affidavit*

G. Contractor's Experience Statement*

H. Bid Document Submission Checklist*

Schedule of Prices*

Notice of Award

Agreement

Construction Performance Bond

Construction Payment Bond

Exhibit B Mandatory Affirmative Action Language

General Conditions

Supplementary Conditions

Schedule of Insurance Requirements

Schedule of Reports and Drawings

Schedule of Dispute Resolution

Prevailing Wages

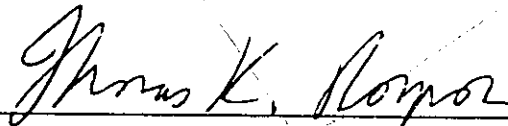
Technical Specifications

Appendix No. 1 - Supplemental Electrical Specifications

Appendix No. 2 - Light Pole Installation Details

Drawings: BOUND SEPARATELY; 5 sheets dated April 30, 2001

* At Issue Date included in pocket; bound in executed Contract Documents.



Thomas K. Rospos, P.E.

New Jersey P.E. License No. 27028

Birdsall Engineering, Inc.

1700 Main Street

South Belmar, NJ 07719

BID ENCLOSED

Bidder: _____

(Name and Mailing Address)

TO Owner: _____

(Enter Owner Same as in Invitation to Bid)

Work Title: _____

(Enter Work Title Same as in Invitation to Bid)

BID FORM

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

BIDDER: _____

(Enter Bidder's legal name and address)

1. Documents. Bidder understands and accepts all provisions of the Contract Documents.
2. Bid Form Supplements. Bidder encloses herewith the following executed Bid Form Supplements: Bid Guarantee, Consent of Surety, Statement of Corporate Ownership, List of Subcontractors, Acknowledgement of Receipt of Changes to Contract Documents, Non-Collusion Affidavit, Contractor's Experience Statement and Bid Document Submission Checklist.
3. Schedule of Prices. Bidder encloses herewith a completed Schedule of Prices in accordance with the Instructions to Bidders Section of this document.

4. Communications. Bidder requests that communications regarding this Bid be addressed as follows:

Name: _____
Address: _____
Telephone: _____
Fax: _____

5. Signature. Bidder executes this Bid by signature of the person or persons authorized to sign for the Bidder.

SIGNATURE: _____

Name (printed): _____

SIGNATURE: _____

Name (printed): _____

Date: _____

BID FORM SUPPLEMENT A
BID GUARANTEE
(As Required by N.J.S.A. 40A: 11-21)

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

BIDDER'S LEGAL NAME: _____

INSTRUCTIONS:

(1) Bidder must calculate Bid Guarantee at ten (10) percent of the Total Bid Amount shown by Bidder in the Schedule of Prices. The maximum required Bid security shall be Twenty Thousand Dollars (\$20,000).

(2) Bidder must make Bid Guarantee payable to Owner either in the form of a certified check or Bid Bond issued by a surety authorized to do business in state where the work is to be performed.

(3) A Bid Bond must incorporate the following information and provisions:

Surety Name and Address
Owner (Same as in Invitation to Bid)
Work Title (Same as in Invitation to Bid)
Bidder (Same as in Bid Form)
Penal Sum (Amount as required in Contract Documents)
Default (According to Contract Documents)
Payment (According to Contract Documents)

(4) Bidder, and Surety when a Bid Bond is submitted, must understand and accept all provisions regarding forfeiture of Bid security as set forth in the Instructions to Bidders.

(5) Bidder must understand and accept that any departure in the required amount of Bid Guarantee from the amount calculated as specified in the Contract Documents, or any departure in the provisions incorporated in a Bid Bond from the provisions specified in the Contract Documents, shall be grounds for rejection of the Bid.

Bidder must check and initial one of the following:

_____ Bidder has affixed hereto a certified check.

_____ Bidder has affixed hereto a Bid Bond.

BID FORM SUPPLEMENT B
CONSENT OF SURETY
(Pursuant to N.J.S.A. 40A: 11-22)

_____, (Hereinafter "Surety"),
Authorized to do business in state where work is to be performed, hereby agrees that if

_____,
(Enter Bidder same as in Bid Form)

(Hereinafter "Bidder") is issued a Notice of Award by TOWNSHIP OF BRICK for PROPOSED SITE LIGHTING - VARIOUS LOCATIONS.

Surety will provide Bidder with a Construction Performance Bond and a Construction Payment Bond in the forms and in the amounts as required by the Contract Documents.

Dated: _____

BY: _____

_____, Attorney-in-Fact

BID FORM SUPPLEMENT C
STATEMENT OF CORPORATE OWNERSHIP
(Pursuant to N.J.S.A. 52:25-24.2)

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

If Bidder is a proprietorship, check here _____ and do not complete this statement, which applies only to corporations and partnerships [N.J.S.A. 52:25-24.2].

Bidder hereby sets forth the names and addresses: (a) of all stockholders in the corporation or partnership submitting the Bid who own 10 percent or more of its stock of any class; or (b) of all individual partners in the partnership who own a 10% or greater interest therein. If one or more such stockholder or partner is itself a corporation or partnership, the stockholders holding 10 percent or more of that corporation's stock, or the individual partners owning 10 percent or greater interest in that partnership, as the case may be, shall also be listed.

NAME OF CORPORATION OR PARTNERSHIP: _____

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

If additional sheets are necessary, complete the following: _____ additional sheets are attached hereto and made a part of this Statement of Corporate Ownership.

BID FORM SUPPLEMENT D
LIST OF SUBCONTRACTORS

Requested by
THE LOCAL PUBLIC CONTRACT LAW
N.J.S.A. 40A: 11-16
And P.L. 1997, Chapter 408

TOWNSHIP OF BRICK
BID OPENING DATE Friday, May 18, 2001

Work Title: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

Job No:53145000

CONTRACTOR: _____

Name Under Which Subcontractor Licensed	License No.	N.J. Dept. of Labor Certificate No.	Address of Office Mill or Shop	Specific Description of Subcontract	Percent of Contract	Price Quote to be Awarded to Subcontractor

I, _____, (NAME OF CONTRACTOR) _____, certify that the price quotes submitted above will be awarded to each Subcontractor should I be awarded the Contract.

NAME: _____

ADDRESS: _____

SIGNED BY: _____

BID FORM SUPPLEMENT E
ACKNOWLEDGEMENT OF RECEIPT OF CHANGES TO CONTRACT DOCUMENTS

TOWNSHIP OF BRICK

**Work Title: PROPOSED SITE LIGHTING - VARIOUS
LOCATIONS**

Job No: 53145000

Pursuant to N.J.A.C. 40A:11-23.1a., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidder shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

Acknowledgement by Bidder:

Name of Bidder: _____

By Authorized Representative:

Signature: _____

Printed Name and Title: _____

DATE: _____

BID FORM SUPPLEMENT F
NON-COLLUSION AFFIDAVIT

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

The undersigned, of full age, being duly sworn according to law on my oath depose and say: that I am of the firm making the Bid; that I executed the Bid with full authority to do so; that Bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the Work; and that all statements contained in the Bid and in this affidavit are true and correct, and made with full knowledge that Owner relies upon the truth of the statements contained in the Bid and in the statements contained in this affidavit in an award of a contract for the Work.

I further warrant that no person or selling agency has been employed or retained to solicit or secure a contract upon an agreement or understanding for a commission, percentage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Bidder in accordance with N.J.S.A. 52:34-15.

Signature: _____

Name (printed): _____

Bidder (printed): _____

Subscribed and sworn to
before me this ____ day
of _____ 200__.

NOTARY PUBLIC of
My commission expires _____, 200__.

BID FORM SUPPLEMENT G
CONTRACTOR'S EXPERIENCE STATEMENT

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

BIDDER'S LEGAL NAME: _____

The bidder is requested to state below what work of a similar character to that included in the proposed Contract he has done, and give references that will enable the Owner to judge of his experience, skill and business standing:

Bidders and proposed Subcontractors may be required to submit additional information regarding their respective financial condition prior to the award of the contracts.

(Add supplementary pages if necessary)

BID FORM SUPPLEMENT H
BID DOCUMENT SUBMISSION CHECKLIST

TOWNSHIP OF BRICK

**Work Title: PROPOSED SITE
LIGHTING - VARIOUS LOCATIONS**

Job No: 53145000

- A. Failure to submit the following documents is a mandatory cause for the bid to be rejected
(N.J.S.A. 40A:11-23.2)**

Required With
Submission of Bid
(Owner's checkmarks)

Initial Each Item
Submitted with Bid
(Bidder's initials)

☒	A Bid Guarantee as required by <u>N.J.S.A. 40A:11-21</u> (Bid Form Supplement A)	
☒	A Certificate from a Surety Company, pursuant to <u>N.J.S.A. 40A:11-22</u> (Bid Form Supplement B)	
☒	A Statement of Corporate Ownership, pursuant to <u>N.J.S.A. 52:25-24.2</u> (Bid Form Supplement C)	
☒	A List of Subcontractors as required by <u>N.J.S.A. 40A:11-16</u> (Bid Form Supplement D)	
☒	If applicable, bidder's acknowledgement of receipt of any notice(s) or revision(s) or addenda to an advertisement, specifications or bid document(s) (Bid Form Supplement E)	
	Copies of NJDOL Contractor Registration Certificates for the prime contractor and all subcontractors pursuant to <u>N.J.S.A. 34:11-56.48</u>	

- B. Failure to submit the following documents and/or requirements may be a cause for the bid to be rejected.
(N.J.S.A. 40A:11-23.1b.)**

Required with
Submission of Bid
(Owner's checkmarks)

Initial Each Item
Submitted with Bid
(Bidder's initials)

☒	Submission of a Non-Collusion Affidavit (this form must be Notarized) (Bid Form Supplement F)	
☒	Contractor's Experience Statement (Bid Form Supplement G)	
☒	All unit prices submitted and extensions properly computed	

Required with
Submission of Bid
(Owner's checkmarks)

Initial Each Item
Submitted with Bid
(Bidder's initials)

☒	TOTAL BID AMOUNT stated in figures and in writing, as per the Instructions To Bidders section of this document.	
☒	All forms signed, initialed, certified, and notarized as required	

- C. SIGNATURE: The undersigned hereby acknowledges and has submitted the above listed requirements.**

Name of Bidder: _____

By Authorized Representative:

Signature: _____

Print Name and Title: _____

Date: _____

SCHEDULE OF PRICES

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

Bidder proposes to complete the Work in accordance with the Contract Documents at the prices set forth in this Schedule of Prices.

<u>No.</u>	<u>Title and Pay Basis</u>	<u>Amount</u>
------------	----------------------------	---------------

PAY ITEMS

BASE BID – WINDWARD BEACH ENTRANCE AREA LIGHTING

All Base Bid Pay Items will be included in the Work. Bidder shall include all Base Bid Pay Items in the Base Bid Amount.

Section 1 – General Work

1A.	GENERAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING, LUMP SUM WORK at	
	Dollars and	
	 Cents per	
	LUMP SUM equals:	
		\$ _____.

Section 2 – Decorative Site Lighting

2A.	WINDWARD BEACH – ENTRANCE AREA LIGHTING, LUMP SUM WORK at	
	Dollars and	
	 Cents per	
	LUMP SUM equals:	
		\$ _____.

Section 4 – Electrical Work

4A.	ELECTRICAL WORK - WINDWARD BEACH ENTRANCE AREA LIGHTING, LUMP SUM WORK at	
	Dollars and	
	 Cents per	
	LUMP SUM equals:	
		\$ _____.

Name of Bidder: _____ 00410-10 Signature of Bidder: _____

No.

Title and Pay Basis

Amount

PAY ITEMS

BASE BID – WINDWARD BEACH ENTRANCE AREA LIGHTING

Section 6 – Site Restoration

6A.

SITE RESTORATION – WINDWARD BEACH ENTRANCE
AREA LIGHTING, LUMP SUM WORK at

.....Dollars and

..... Cents per

LUMP SUM equals:

\$ _____.

TOTAL BASE BID AMOUNT:
(for determining Bid Security)

.....Dollars and

.....Cents

\$ _____.

Note to Bidder: The apparent lowest responsible Bidders will be determined by Owner from the sum of prices Bid for all Base Bid Pay Items plus, if applicable, those Optional Pay Items and Alternate Pay Items selected by Owner.

Name of Bidder: _____

00410-11

Signature of Bidder: _____

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A1 – WINDWARD BEACH SIDEWALK LIGHTING

All Alternate A1 Pay Items will be included in the Work. Bidder shall include all Alternate A1 Pay Items in the Alternate A1 Bid Amount.

Section 1 – General Work

1B(A1). GENERAL WORK – WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$ _____.

Section 2 – Decorative Site Lighting

2B(A1). WINDWARD BEACH – SIDEWALK LIGHTING, LUMP SUM
WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$ _____.

Section 4 – Electrical Work

4B(A1). ELECTRICAL WORK - WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$ _____.

Section 6 – Site Restoration

6B(A1). SITE RESTORATION – WINDWARD BEACH SIDEWALK
LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$ _____.

TOTAL ALTERNATE A1 BID AMOUNT:

.....Dollars and
.....Cents
\$ _____.

Name of Bidder: _____ 00410-12 Signature of Bidder: _____

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A2 – DRUM POINT RECREATION COMPLEX LIGHTING

All Alternate A2 Pay Items will be included in the Work. Bidder shall include all Alternate A2 Pay Items in the Alternate A2 Bid Amount.

Section 1 – General Work

1C(A2). GENERAL WORK – DRUM POINT RECREATION COMPLEX
LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 3 – Sports Lighting

3A(A2). DRUM POINT RECREATION COMPLEX LIGHTING, LUMP
SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 4 – Electrical Work

4C(A2). ELECTRICAL WORK - DRUM POINT RECREATION
COMPLEX LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 6 – Site Restoration

6C(A2). SITE RESTORATION – DRUM POINT RECREATION
COMPLEX LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

TOTAL ALTERNATE A2 BID AMOUNT:

.....Dollars and
.....Cents

\$_____.

Name of Bidder:_____

00410-13

Signature of Bidder:_____

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A3 – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING

All Alternate A3 Pay Items will be included in the Work. Bidder shall include all Alternate A3 Pay Items in the Alternate A3 Bid Amount.

Section 1 – General Work

1D(A3). GENERAL WORK – VETERANS MEMORIAL MIDDLE
SCHOOL LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 3 – Sports Lighting

3B(A3). VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING,
LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 4 – Electrical Work

4D(A3). VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING,
LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

Section 6 – Site Restoration

6D(A3). SITE RESTORATION - VETERANS MEMORIAL MIDDLE
SCHOOL LIGHTING, LUMP SUM WORK at
.....Dollars and
..... Cents per
LUMP SUM equals:
\$_____.

TOTAL ALTERNATE A3 BID AMOUNT:

.....Dollars and
.....Cents
\$_____.

Name of Bidder: _____ 00410-14 Signature of Bidder: _____

No.

Title and Pay Basis

Amount

PAY ITEMS

ALTERNATE A4 – WINDWARD BEACH SIDEWALK

All Alternate A4 Pay Items will be included in the Work. Bidder shall include all Alternate A4 Pay Items in the Alternate A4 Bid Amount.

Section 5 – Concrete Work

5A(A4). CONCRETE SIDEWALK, 4" THICK, UNIT PRICE WORK at
.....Dollars and
..... Cents per
SQUARE FOOT for an estimated
5,350 SQUARE FEET equals:
\$ _____

5B(A4). CONCRETE CURB, UNIT PRICE WORK at
.....Dollars and
..... Cents per
LINEAR FOOT for an estimated
100 LINEAR FEET equals:
\$ _____

Section 6 – Restoration

6E(A4). TOPSOIL, FERTILIZE & SEED, UNIT PRICE WORK at
.....Dollars and
..... Cents per
SQUARE YARD for an estimated
480 SQUARE YARDS equals:
\$ _____

TOTAL ALTERNATE A4 BID AMOUNT:

.....Dollars and
.....Cents
\$ _____

Note to Bidder: The apparent lowest responsible Bidders will be determined by Owner from the sum of prices Bid for all Base Bid Pay Items plus, if applicable, those Optional Pay Items and Alternate Pay Items selected by Owner. END OF SCHEDULE

Name of Bidder: _____ 00410-15 Signature of Bidder: _____

INVITATION TO BID

NOTICE TO BIDDERS hereby is given that Bids are invited and will be received as set forth below.

1. **OWNER: TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY**
2. **WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS**
3. **WORK SITE:**

This project entails the furnishing and installation of site lighting and miscellaneous site improvements at three locations within the Township of Brick: Windward Beach on Princeton Avenue, the Drum Point Recreation Complex on Drum Point Road and Veterans Memorial Middle School near Van Zile Road.

4. **WORK DESCRIPTION:**

The work of this Contract consists of the furnishing and installation of site lighting and concrete work, which will include the following: general work, sports lighting, decorative architectural lighting, electrical work, concrete sidewalk and curb and site restoration.

5. **ENGINEER:**

BIRDSALL ENGINEERING, INC.
1700 MAIN STREET
SOUTH BELMAR, NJ 07719

ATTENTION: THOMAS K. ROSPOS, P.E.
TELEPHONE: (732) 681-1165

6. **CONTRACT DOCUMENTS:**

Contract Documents may be examined and/or purchased at \$50 per set Monday through Friday, except legal holidays, between the hours of 9:00 a.m. and 4:00 p.m., at the office of the Purchasing Agent at the Township Municipal Building at the address set forth in Paragraph #12. No refunds will be made.

7. **USE OF CONTRACT DOCUMENTS:**

Contract Documents are available solely for the purpose of obtaining Bids and not to confer a license or grant for any other purpose.

8. **PRE-BID MEETING:** None

9. **BID GUARANTEE:**

Bid Guarantee is required in an amount not less than ten (10) percent of the total amount indicated in the Bid, but not in excess of Twenty Thousand Dollars (\$20,000).

10. CONSENT OF SURETY:

A certificate is required from a surety company stating that it will provide bonds in the form and amounts as stated in the Contract Documents.

11. SUBMISSION OF BIDS:

Bids shall be placed in sealed envelopes and must be received by Owner prior to the Date and Time indicated for Public Bid Opening and Reading in Paragraph #12. No Bids will be received after the indicated Date and Time. Bidders may either:

(a) Mail Bids to: TOWNSHIP OF BRICK
Office of the Township Clerk
401 Chambers Bridge Road
Brick, NJ 08723

or (b) hand deliver Bids to Owner at the Place indicated for Public Bid Opening and Reading in Paragraph #12.

12. PUBLIC BID OPENING AND READING:

Date: Friday, May 18, 2001
Time: 10:00 a.m.
Location: Brick Municipal Complex
401 Chambers Bridge Road
Brick, NJ 08723

13. STATUTORY REQUIREMENTS:

Bidders are required to comply with all applicable Laws and Regulations including P.L. 1975, C.127 (Affirmative Action) P.L. 1999, C.238 (Public Works Contractor Registration) and P.L. 1963, C. 150 (Prevailing Wages).

14. REJECTION OF BIDS:

Owner reserves the right to reject any or all Bids and to waive any immaterial defect or informality in any Bid, if deemed in the best interest of Owner.

BY ORDER OF

JOSEPH SCARPELLI, MAYOR

ATTEST: Scott MacFadden, Township Administrator

INSTRUCTIONS TO BIDDERS

1. Contract Documents

1.1 Bidder may: (a) contact Engineer if the Contract Documents obtained by Bidder are not complete as listed on the Title Page; (b) notify Engineer in writing of questions regarding the Contract Documents; and (c) contact Engineer to verify the number, if any, of Addenda issued after the Issue Date of Contract Documents.

1.2 Bidder may contact Engineer to request of copy of the prevailing wage determination made for the Work by the New Jersey Department of Labor at or about the Issue Date of the Contract Documents. In accordance with the Agreement in the Contract Documents, applicable rates are those in effect on the date of the Notice of Award.

1.3 Bidder may: (a) examine reports and drawings regarding subsurface and physical conditions, and hazardous environmental condition at Site, if listed in the Schedule of Reports and Drawings in the Supplementary Conditions; (b) make independent investigations regarding Underground Facilities since Owner and Engineer are not responsible for accuracy and completeness of information in the Contract Documents regarding Underground Facilities; and (c) contact Engineer to arrange Site inspections subject to the understandings: that Bidder shall indemnify and hold harmless Owner and Engineer from claims arising from Bidder's inspections; and that information and representations obtained during inspections of the Site are not a part of the Contract Documents.

2. Bid Form and Supplements

2.1 Bidder must complete all information required on the Bid Form and Bid Form Supplements, in accordance with instructions thereon, responsively, without conditions, and handwritten in ink or typewritten.

3. Schedule of Prices

3.1 Bidder must complete all entries required on the Schedule of Prices responsively, without conditions, and handwritten in ink or typewritten.

3.2 Bidder, with regard to Work to be defined in the Agreement, must understand that Pay Items may be classified solely for Bid purposes as follows: (a) all Basic Pay Items will be included in the Work; (b) any, all, or none of the Optional Pay Items may be included in the Work; and (c) one or none in each category of Alternate Pay Items may be included in the Work.

3.3 Bidder must understand: (a) that Pay Items are designated as Lump Sum Work or Unit Price Work; (b) that the unit of measurement and the number of units are listed for Unit Price Work; and (c) that the number of units is an estimate solely for Bid purposes and payment will be based on quantities measured pursuant to the Contract Documents.

3.4 Bidder, for all Pay Items, must enter Bid prices in words, as is done typically in writing bank checks, and understand that these word entries shall govern over numerical entries calculated from Bid prices. New Jersey State Sales and Use Taxes should not be included in Bid prices since Owner is a public body and exempt from these taxes.

3.5 Bidder, for all Pay Items, must extend amounts for Lump Sum Work as numerical entries in the same amount as the word entry; and for Unit Price Work as numerical entries in amounts calculated as the word entry multiplied by the number of units indicated. These entries of Amount are subject to verification by the Owner based on word entries.

3.6 Bidder must make a numerical entry of the Total Bid Amount calculated as the sum of the following: (a) all Basic Pay Items; (b) if applicable, all Optional Pay Items; and (c) if applicable, Alternative Pay Items in each category with the highest price. The entry for Total Bid Amount is subject to verification by the Owner based on word entries.

4. Bid Submission.

4.1 Bidder must submit only the completed and executed Bid Form and Bid Form Supplements. The submittal shall not include the bound Contract Documents or Drawings listed on the Title Page. Bidder must understand and accept the bound Contract Documents and Drawings, although not returned with the Bid Form and Bid Form Supplements, are incorporated with the Bid as if made a part thereof.

4.2 Bidder must place Bid Form and Bid Form Supplements in an opaque envelope, which must be sealed, and marked outside with the name of Owner, the title of Work, and the name and address of Bidder. Bidder may either: (a) hand deliver the opaque envelope to Owner; or (b) mail or otherwise send the opaque envelope to Owner, in which case the opaque envelope must be enclosed in an outer envelope and addressed to the Owner with the notation "Bid Enclosed". Addresses for hand delivery and mailing are given in the Invitation to Bid.

5. Bid Withdrawal or Modification.

5.1 Bidder, prior to Public Bid Opening and Reading, may withdraw or modify Bid by a notification to Owner signed and delivered as required for the Bid, and with the notation "Bid Withdrawal" or "Bid Modification", as applicable, on the opaque envelope and on the outer envelope if applicable.

6. Public Bid Opening and Reading

6.1 Owner, at Public Bid Opening and Reading, will receive the Bids publicly, unseal the Bids publicly, and announce and record the Bid prices publicly, in the presence of any Bidders or their agents who are present at the Public Bid Opening and Reading.

6.2 Owner will not receive Bids after the time set forth for Public Bid Opening and Reading in the Invitation to Bid.

7. Bid Disposition.

7.1 Owner, within ten (10) days after Public Bid Opening and Reading, Sundays and holidays excepted, will take one of the following actions: (a) reject all Bids and return Bid Security to all Bidders; or (b) identify the three (3) apparent lowest responsible Bidders and return Bid Security to the remaining Bidders.

7.2 Owner, in identifying the apparent lowest responsible Bidders, will make determinations as follows: (a) reject Bids that are conditional, non-responsive, or fail to comply with the Contract Documents; (b) reject Bids with obviously unbalanced entries in the Schedule of Prices; and (c) reject Bids where reasonable inquiries by Owner reveal that Bidder does not have the ability to perform in accordance with the Contract Documents.

7.3 Owner, no more than sixty (60) days after Bid Opening, will either reject remaining Bids and return Bid Security thereof, or issue to the apparent lowest responsible Bidder (hereinafter "Successful Bidder") a Notice of Award.

8. Notice of Award

8.1 The Notice of Award, if issued, will be in the form and incorporate the provisions set forth in the Notice of Award incorporated in the Contract Documents.

8.2 The Agreement issued with the Notice of Award will be in the form and incorporate the provisions set forth in the Agreement incorporated in the Contract Documents. In addition, the Agreement will incorporate appropriate language for Articles noted "To Be Completed with Issuance of Notice of Award".

9. Successful Bidder's Obligations

9.1 Successful Bidder within fourteen (14) days, Sundays and holidays excepted, after receiving the Notice of Award shall deliver to Owner four (4) copies of each of the following: signed Agreement, Construction Performance Bond, Construction Payment Bond, Surety Disclosure Statement, Certification of Authority, Certificate of Insurance, and Affirmative Action Evidence.

9.2 Failure by Successful Bidder to sign the Agreement containing the mandatory affirmative action language set forth in Exhibit B of the Agreement shall be deemed failure to furnish a signed Agreement, and thereby grounds for forfeiture of Bid Security.

9.3 Failure by Successful Bidder to provide a Construction Performance Bond in the amount and under the terms specified in the Contract Documents may be deemed failure to furnish the required Construction Performance Bond, and thereby grounds for forfeiture of the Bid Security.

9.4 Failure by Successful Bidder to provide a Construction Payment Bond in the amount and under the terms specified in the Contract Documents may be deemed failure to furnish the required Construction Payment Bond, and thereby grounds for forfeiture of the Bid Security.

9.5 Failure of Successful Bidder to provide a Surety Disclosure Statement in conjunction with Performance and Payment Bonds in the form set forth in N.J.S.A. 2A:44-143d may be deemed failure to furnish the required Security Disclosure Statement and thereby grounds for forfeiture of Bid Security.

9.6 Failure of Successful Bidder to provide a Certification of Authority in conjunction with Performance and Payment Bonds as issued by the Commissioner of the Department of Insurance may be deemed failure to furnish the required Certificate of Authority and thereby grounds for forfeiture of Bid Security.

9.7 Failure by Successful Bidder to provide a Certificate of Insurance listing the coverage's and limits of liability specified in the Schedule of Insurance Requirements in the Supplementary Conditions may be deemed failure to furnish the required Certificate of Insurance, and thereby grounds for forfeiture of the Bid Security.

9.8 Failure by Successful Bidder to provide evidence of an existing approved or sanctioned Affirmative Action Program, or evidence of submission of an appropriate form to the New Jersey Affirmative Action Office on or before the date Successful Bidder signs Agreement, may be deemed failure to furnish the required Affirmative Action Evidence, and thereby grounds for forfeiture of the Bid Security.

9.8 (a) In the event Bidder does not have evidence of an existing approved or sanctioned Affirmative Action Program, Bidder should complete Form AA-201 (copy enclosed) and: retain one copy; submit three (3) copies to the Affirmative Action Office and obtain a receipt thereof; and submit to Owner as evidence of Affirmative Action one (1) copy with a copy of the delivery receipt from the Affirmative Action Office. Bidder should verify this initial procedure, and Contractor's monthly reporting requirements, with the Affirmative Action Office at the following address:

Affirmative Action Office
Department of Treasury
State House
CN 209
Trenton, NJ 08625

9.9 Failure by Successful Bidder to provide a valid Public Works Contractor Registration Certificate (pursuant to N.J.S.A. 34:11-56.48) issued by the N.J. Department of Labor for the Successful Bidder and all subcontractors may be deemed failure to furnish the required Registration Certificate and thereby grounds for forfeiture of Bid Security.

9.9(a) In the event the Bidder does not have the required Registration Certificate, the Bidder should submit a copy of the registration form and proof of application to the Contractor Registration Unit at the following address:

Contractor Registration Unit
New Jersey Department of Labor
Division of Wage and Hour Compliance
P.O. Box 389
Trenton, NJ 08625-0389

10. Forfeiture of Bid Security

10.1 Owner may declare Successful Bidder's Bid abandoned, annul Successful Bidder's Notice of Award; and declare Successful Bidder's Bid Security forfeited unconditionally, as liquidated damages and not as a penalty, if fifteen (15) days, Sundays and holidays excepted, after receiving the Notice of Award, the Successful Bidder has failed to deliver to Owner four (4) copies of each of the following: signed Agreement, Construction Performance Bond, Construction Payment Bond, Surety Disclosure Statement, Certificate of Authority, Certificate of Insurance, and Affirmative Action Evidence.

11. Owner's Execution of Agreement

11.1 Owner, within seven (7) days, Sundays and holidays excepted, after receiving from the apparent lowest responsible Bidder the signed Agreements and required attachments thereto will: (a) return Bid security; and (b) deliver to the Contractor one executed counterpart of the Contract Documents incorporating Owner's execution of the Agreement which establishes the Effective Date of Agreement.

12. Remaining Bidders

12.1 Owner, within three (3) days, Sundays and holidays excepted, following execution of the Agreement, will return Bid Security to the remaining Bidders.

13. Completion Time

13.1 Bidders are hereby advised that this project has a prioritized and very aggressive schedule. The proposed lighting at Windward Beach (entrance area and sidewalk lighting) must be completed for certification and use by June 29, 2001. The site improvements at Windward Beach, which includes the concrete sidewalk, curb and handicap ramps shall be completed for certification and use by June 29, 2001. The sports lighting at Veterans Memorial Middle School and the Drum Point Recreation Complex must be completed for certification and use by September 1, 2001.

NOTICE OF AWARD

OWNER: TOWNSHIP OF BRICK

WORK TITLE: PROPOSED SITE LIGHTING - VARIOUS LOCATIONS

DATE OF NOTICE OF AWARD:

TO:

1. Notification. You are hereby notified that your Bid has been accepted by OWNER and you are designated "Successful Bidder". Enclosed is a copy of OWNER's resolution regarding the award of a contract.

2. Agreement. Enclosed are four (4) copies of completed and unsigned Agreement that refers to the Schedule of Prices submitted with your Bid.

3. Successful Bidder's Obligations. You must comply with the requirements regarding Successful Bidder's Obligations as set forth in the Instruction to Bidders.

BY: _____
(Signature)

Thomas K. Rospos, P.E.

Via:

[] Certified Mail, Return Receipt Requested

[] Hand Deliver:

Date: _____

Received by: _____

AGREEMENT

in conjunction with PROPOSED SITE LIGHTING - VARIOUS LOCATIONS, (hereinafter
"Work Title")

THIS AGREEMENT by and between:

TOWNSHIP OF BRICK, 401 Chambers Bridge Road, Brick, NJ 08723 (hereinafter "OWNER")

and _____ (hereinafter "CONTRACTOR")

OWNER and CONTRACTOR, for and in consideration of the mutual covenants, promises, and agreements hereinafter set forth, agree to and with each other as follows:

1. Defined Terms. Terms used in this Agreement which are defined in the General Conditions and Supplementary Conditions shall have the meanings indicated therein.

2. CONTRACTOR agrees to perform the Work in accordance with the Contract Documents.

3. OWNER agrees to pay CONTRACTOR for the Work in accordance with the Contract Documents.

4. Contract Documents. The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR are as defined in the General Conditions and [include Addendum No. ____] [include Addenda Nos. ____ through ____, inclusive.] [do not include addenda.] TO BE COMPLETED WITH ISSUANCE OF THE NOTICE OF AWARD.

5. Work. Pursuant to paragraph 1.01.A.48 of the General Conditions, the Work is listed on the Schedule of Prices [.] [as amended hereby to delete the following Optional Pay Items:] [as amended hereby to select the following Alternate Pay Items:] TO BE COMPLETED WITH ISSUANCE OF THE NOTICE OF AWARD.

6. Notice to Proceed. Pursuant to paragraph 2.03.A of the General Conditions, a Notice to Proceed may be issued any time within thirty (30) days after the Effective Date of the Agreement.

7. Commencement of Contract Time. Pursuant to paragraph 2.03.A of the General Conditions, Contract Time shall commence on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed.

8. Contract Times. Contract Times hereby are made of the essence. Pursuant to paragraph 1.01.A.14 of the General Conditions:

- (a) Substantial Completion. No separate Contract Time is applicable to substantial completion; and neither tentative nor definitive certificates regarding substantial completion will be issued pursuant to paragraph 14.04 of the General Conditions.

- (b) Final Payment. The Work shall be complete and ready for final payment pursuant to paragraph 14.07 of the General Conditions. The proposed lighting at Windward Beach (entrance area and sidewalk lighting) must be completed for certification and use by June 29, 2001. The site improvements at Windward Beach, which includes the concrete sidewalk, curb and handicap ramps shall be completed for certification and use by June 29, 2001. The sports lighting at Veterans Memorial Middle School and the Drum Point Recreation Complex must be completed for certification and use by September 1, 2001.

9. Contract Price. Pursuant to paragraph 1.01.A.13 of the General Conditions, the Contract Price for the Work is _____ Dollars (\$_____). TO BE COMPLETED WITH ISSUANCE OF THE NOTICE OF AWARD.

10. Retainage. Pursuant to paragraph 14.02.A.3 of the General Conditions, retainage hereby is established as follows: Two (2) Percent if the Contract Price Exceeds One Hundred Thousand Dollars (\$100,000); or Ten (10) percent if the Contract Price is One Hundred Thousand Dollars (\$100,000) or less.

11. Progress Payments. Pursuant to paragraph 14.02 of the General Conditions, progress payments will be made based on the Schedule of Prices less retainage and all other deductions applicable in accordance with the Contract Documents.

12. Damages. Pursuant to paragraph SC-12.04 of the Supplementary Conditions, damages are established at: the greater of Two Hundred Dollars(\$200) per day or one twentieth of one percent (0.0005) per day multiplied by the Contract Price.

13. Prevailing Wages. Pursuant to New Jersey statutory requirements (P.L. 1963, C. 150), a wage determination for the Work in effect on the date of the Notice of Award and made by the New Jersey Department of Labor is made a part of this Agreement by reference and shall apply as if set forth herein at length. ENGINEER shall request the aforementioned wage determination, maintain it on file during the Work, and provide a copy to the CONTRACTOR upon request.

14. Mandatory Affirmative Action Language. CONTRACTOR and all subcontractors shall comply with the provisions of P.L. 1975, C.127 and the regulations adopted thereunder, and specifically agree to comply with the terms and conditions of Exhibit B Mandatory Affirmative Action Language which is attached hereto and made a part of the Contract Documents.

15. Construction Contract Reports. Pursuant to Exhibit B Mandatory Affirmative Action Language, and rules and regulations related thereto, CONTRACTOR shall complete and submit monthly project manning reports as prescribed by the Affirmative Action Office.

16. ENGINEER. Pursuant to paragraph 1.01.A.19 of the General Conditions, Engineer is as named as follows: Birdsall Engineering, Inc., a New Jersey Corporation with offices at 1700 Main Street, South Belmar, New Jersey 07719.

17. ENGINEER's Consultant. Pursuant to paragraph 1.01.A.20 of the General Conditions, ENGINEER's Consultant is named as follows: Johnson & Associates Consulting Engineers, Inc., Independent Lighting Associates and Musco Lighting

18. Prohibition on Assignment. CONTRACTOR shall not assign or transfer any of its rights or interests in this Agreement without the written consent of the Owner.

19. Permits. Pursuant to Supplementary Condition 6.08A of the General Conditions, CONTRACTOR is responsible to obtain all permits required for the work except for the following: None

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement.

CONTRACTOR:

Authorized Signature: _____

Name and Title: _____

Attest: (Signature) _____

Name and Title: _____

Signature Date: _____

OWNER:

Authorized Signature: _____

Name and Title: _____

Attest: (Signature) _____

Name and Title: _____

Effective Date of the Agreement: _____

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place
of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.
2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.
3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:
 - 3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and
 - 3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and
 - 3.3. The OWNER has agreed to pay the Balance of the Contract Price to:
 - 3.3.1. The Surety in accordance with the terms of the Contract;
 - 3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.
4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or
 - 4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 - 4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or
 - 4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.
5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.
6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:
 - 6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;
 - 6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.
7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
 - 12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.
 - 12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
 - 12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
 - 12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)

AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place
of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:
 - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
 1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.
5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.
9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.
14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

- 15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
- 15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
- 15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)

AGENCY or BROKER:

OWNER'S REPRESENTATIVE (Engineer or other party):

EXHIBIT B

P.L. 1975, C. 127 (N.J.A.C. 17:27) MANDATORY AFFIRMATIVE ACTION LANGUAGE CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

a. The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or affectional and sexual orientation. The Contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause;

b. The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex;

c. The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

d. The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to P. L. 1975, C. 127, as amended and supplemented from time to time.

e. When scheduling workers in each construction trade, the contractor or subcontractor agrees to attempt in good faith to employ minority and female workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27-7.3; provided, however, that the Affirmative Action Office may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by 1, 2, 3 below, as long as the Affirmative Action Office is satisfied that the contractor is scheduling workers provided by a union which provides evidence, in accordance with standards prescribed by the Affirmative Action Office, that its percentage of active "card carrying" members who are minority and female workers is equal to or greater than the applicable employment goal prescribed by N.J.A.C. 17:27-7.3, promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- A. If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules

promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as supplemented and amended from time to time. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five days prior to the commencement of construction work, the contractor or subcontractor agrees to attempt to hire minority and female workers directly, consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and female workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire minority and female workers directly, consistent with the applicable employment goal, by complying with the hiring procedures prescribed under (c) below; and the contractor or subcontractor further agrees to take said action immediately if it determines or is so notified by the Affirmative Action Office that the union is not referring minority and female workers consistent with the applicable employment goal.

- B. If the scheduling of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of (b) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable county employment goals:
1. To notify the Public Agency Compliance Officer, Affirmative Action Office, and at least one approved minority referral organization of its manpower needs, and request referral of minority and female workers;
 2. To notify any minority and female workers who have been listed with it as awaiting available vacancies;
 3. Prior to commencement of work, to request the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, to refer minority and female workers to fill job openings;
 4. To leave standing requests for additional referral to minority and female workers with the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area until such time as the workforce is consistent with the employment goal;
 5. If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and female employees remain on the site consistent with the employment goal; and to employ any minority and female workers so laid off by the contractor or any other construction site in the area on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing P.L. 1975, c. 127;
 6. To adhere to the following procedure when minority and female workers apply or are referred to the contractor or subcontractor:

- i. If said individuals have never previously received any document or certification signifying a level of qualification lower than that required, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall employ such persons which satisfy appropriate qualification standards; provided however, that a contractor or subcontractor shall determine that the individual at least possesses the skills and experience recognized by any worker skills and experience classification determination which may have been made by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Affirmative Action Office and provided further, that, if necessary, the contractor or subcontractor shall hire minority and female workers who qualify as trainees pursuant to these rules. All of these requirements, however, are limited by the provisions of (D) below.
- ii. If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of said female or minority group individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.
- iii. If, for any reason, said contractor or subcontractor determines that a minority individual or a female is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing with the reasons for the determination, maintain a copy in its files, and send a copy to the Affirmative Action Office.
7. To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Affirmative Action Office and submitted promptly to that office upon request.

- C. The contractor or subcontractor agrees that nothing contained in (B) preceding provision shall preclude the contractor or subcontractor from complying with the hiring hall or apprenticeship provisions in any applicable collective bargaining agreement or hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement: provided, however, that where the practices of a union or apprenticeship program will result in the exclusion of minorities and females or the failure to refer minorities and females consistent with the county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to said provisions (B) without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ female and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds

the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and female workers residing within the geographical jurisdiction of the union.

- D. The contractor agrees to complete an Initial Project Manning Report on forms provided by the Affirmative Action Office or in the form prescribed by the Affirmative Action Office and submit a copy of said form at time of award of construction contract and to submit a copy of the Monthly Project Manning Report once a month thereafter for the duration of this contract to the Affirmative Action Office and to the Public Agency Compliance Officer. The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and off-the-job programs for outreach and training of minority and female trainees employed on the construction projects.
- E. The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (N.J.A.C. 17:27).

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and



AMERICAN CONSULTING
ENGINEERS COUNCIL



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General



Contractors of America

Construction Specifications Institute



These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2) (1996 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC User's Guide (No. 1910-50). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1996 Edition).

EJCDC No. 1910-8 (1996 Edition)

SEP 98

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STANDARD GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT

FOOTNOTE

(SC) The letters "SC" in a circle indicate paragraphs in the STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT that have been amended or supplemented by the Supplementary Conditions of the Contract Documents. This indication is made solely for convenience, and not as a part of the Contract Documents, and failure to make the indication shall not invalidate amendments or supplements set forth in the Supplementary Conditions.

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the

Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

SC 12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

SC 20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

SC 32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

SC 40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases,

steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The

use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

(SC)

B. *Day*

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

(SC) 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

(SC) 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds*

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 *Copies of Documents*

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

(SC) A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified

in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

SC 3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction Conference*

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

SC 3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

3.02 *Reference Standards*

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids),

except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 *Reuse of Documents*

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

- b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price of Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

4.05 *Reference Points*

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property

monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 Hazardous Environmental Condition at Site

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous

Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing

in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations; CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements

of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04 *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be

correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

5.05 OWNER's Liability Insurance

A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

SC A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

SC B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

SC E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work

at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

5.07 Waiver of Rights

A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion

pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required

of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

SC B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

SC B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with

any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. "Or-Equal" Items: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under

paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

SC c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly

required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or

entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor

or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 *Patent Fees and Royalties*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits

and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 *Laws and Regulations*

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

6.10 *Taxes*

SC A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not

unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

SC B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work

Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 *Safety and Protection*

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and

responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample

submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop

Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. ENGINEER's Review

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. Resubmittal Procedures

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 Continuing the Work

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except

as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee*

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or
2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;
2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from

and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and

2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE 7 - OTHER WORK

7.01 *Related Work at Site*

SC A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data*

A. OWNER shall promptly furnish the data required of OWNER under the Contract Documents.

8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations

and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 Insurance

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 Change Orders

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 Limitations on OWNER's Responsibilities

A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 OWNER'S Representative

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

9.02 Visits to Site

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

SC A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another

representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

9.05 *Authorized Variations in Work*

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price Work*

SC A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

9.09 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 *Limitations on ENGINEER's Authority and Responsibilities*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority

or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change

Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable,

and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be

considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

11.02 Cash Allowances

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allow-

ances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE;
CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no

fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by

Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control*

(SC) A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or
2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given

to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

13.05 *OWNER May Stop the Work*

A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop

the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that

item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In

connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

SC A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests,

revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Written Amendment or Change Orders;
- c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or
- d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

D. Reduction in Payment

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

- a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling OWNER to a set-off against the amount recommended; or
- d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld.

OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 CONTRACTOR's Warranty of Title

A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibility.

ties pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will promptly make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. Review of Application and Acceptance

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 Final Completion Delayed

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 OWNER May Suspend Work

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.

15.02 OWNER May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate

the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 *OWNER May Terminate For Convenience*

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of

engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

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ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract with language deletions and/or additions as follows:

(a) Language deletions indicated by strikethroughs, thus: ~~language deletions~~.

(b) Language additions indicated by boldface thus: **language additions**.

(c) Language deleted or unchanged as indicated in brackets thus: [First paragraph deleted.]

1.01 Defined Terms

20. **ENGINEER's Consultant** - An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the ~~Supplementary Conditions Agreement~~.

31(a). **Pay Item**—The part of the Work identified in the Pay Items, listed in the Schedule of Prices, and described in paragraph 14.01.

(40) **Site**—Lands or areas indicated in the Contract Documents as being furnished to OWNER upon which the Work is to be performed, including rights-of way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR. The Site is located generally as indicated in the Invitation to Bid and may be further delineated as indicated in the Drawings. These indications refer to "Work Site" solely to avoid confusion with the term "site plans", or other common terms employing the work "site", and shall not alter the definition of "Site" as set forth herein and as used in the Contract Documents.

1.02 Terminology

1.02.A.2. Whenever in the Contract Documents the term "and/or" is used, it refers to the disposition of only two options ("A" and "B") as "A or B or both".

1.02.D.3. The words "perform" or "provide", when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use. The word "construct" shall mean the same as "perform" or "provide".

1.02.D.5. The word "replace" when used in connection with services, materials, or equipment, shall mean to place in position for service that material and equipment which Contractor initially removed as part of the Work.

2.03 Commencement of Contract Times: Notice to Proceed

2.03.A. The Contract Times will commence to run on the thirtieth day after the Effective

Date of Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. ~~A Notice to Proceed may be given at any time within 30 days after the Effective Date of Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.~~

2.05 Before Starting Construction

~~2.05.B.3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.~~

2.07 Initial Acceptance of Schedules

~~2.07.A.3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.~~

5.06 Property Insurance

5.06.A. Unless otherwise provided in the Supplementary Conditions, ~~OWNER~~ CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount set forth in the Supplementary Conditions ~~of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations).~~ [Remaining provisions of paragraph 5.06.A. are unchanged.]

5.06.B. ~~OWNER~~ CONTRACTOR, if required in the Supplementary Conditions, shall purchase and maintain boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

5.06.E. [Delete paragraph 5.06.E in its entirety.]

6.02 Labor, Working Hours

6.02.B [Add the following language at the end of paragraph 6.02.B] If such consent is given by OWNER, it will be with the understanding that CONTRACTOR shall pay OWNER for all reasonable expenditures made by OWNER for engineering and/or related services required in conjunction with the Work performed outside regular working hours.

6.03 Services, Materials, and Equipment

6.03.B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish a satisfactory Certificate of Compliance pursuant to paragraph 6.03 B-evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents. Only manufactured and farm products of the United States, wherever available, shall be used in the Work.

B. Certificate of Compliance shall list the name and address of supplier; quantity, description, identification, date of shipment, and purchaser of material and/or equipment; and shall include a statement signed by supplier that the material and/or equipment comply with requirements of the Contract Documents. CONTRACTOR shall add to the Certificate of Compliance a signed statement certifying that the material and/or equipment as described by supplier were incorporated into the Work. Required Certificates of Compliance shall be supporting documentation for Applications for Payment pursuant to paragraph 14.02 A. Failure by CONTRACTOR to submit a satisfactory Certificate of Compliance shall be grounds for ENGINEER to refuse to recommend payment pursuant to paragraph 14.02 B.1.

6.05 Substitutes and "Or-Equals"

6.05.A.2.c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d. ~~as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.~~ ENGINEER, before proceeding to evaluate an application, will provide CONTRACTOR with an estimated cost of engineering services for the evaluation and, if applicable, for redesign and other engineering services related to the substitute item. Before ENGINEER proceeds with evaluation of the application, CONTRACTOR shall provide written acknowledgement that the amount of CONTRACTOR's reimbursement to OWNER pursuant to paragraph 6.05.E shall be determined in accordance with ENGINEER's estimated cost of engineering services.

6.08 Permits

6.08.A. Unless otherwise provided in the ~~Supplementary Conditions~~ General Requirements, CONTRACTOR shall obtain and pay for all construction permits and licenses. [Remainder of paragraph unchanged.]

6.10 Taxes

6.10.A. [Add the following sentence at the end of paragraph 6.10.A.] New Jersey Sales and Use Taxes on materials and equipment incorporated in the Work shall not be included in the Schedule of Prices if the OWNER is a public body. CONTRACTOR shall process the appropriate claims for tax exemption.

6.11 Use of Site and Other Areas

6.11.B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations. Removal shall be done no less than daily during the progress of the Work.

7.01 Related Work at Site

7.01.A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts ☐ herefore, or have other work performed by utility owners. ~~If such other work is not noted in the Contract Documents, then: 1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and 2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustments in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made ☐ herefore as provided in paragraph 10.05.~~

9.03 Project Representative

9.03.A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants shall be as provided in paragraph 9.10 ~~and in the Supplementary Conditions.~~ [Second sentence unchanged.]

9.08 Determinations for Unit Price Work

9.08.B. Unless otherwise specified for individual Pay Items in the Specifications, quantities for Unit Price Work will be determined as set forth below.

1. For items paid based on furnish and install: (a) Linear Feet measured parallel to the base or foundation upon which the Work Item is placed; (b) Square Yards calculated using Linear Feet; (c) Acres calculated using horizontal measurements; (d) Cubic Yards calculated using the average end area, grid, or similar earthwork method; and (e) Board Feet calculated as the product of installed length, nominal installed width, and nominal installed thickness. The precision of measurement, grid dimensions, and related field and/or calculation parameters shall be subject to approval by the Engineer.

2. For items paid based on furnish: (a) Pounds or Tons using certified scale weights; (b) Gallons using certified meters calibrated in U.S. Gallons; and (c) Cubic Yards measured by the volume of delivery trucks which are subject to approval by the Engineer based on a shape and level loading that provides for accurate determination of volume.

Schedule of Reports and Drawings

Schedule of Dispute Resolution

12.04 Delays Within CONTRACTOR's Control

12.04.B. The total delay in days shall be computed in accordance with paragraph 17.02 as the number of calendar days, Saturdays, Sundays, and holidays included, after expiration of the Contract Time until, as applicable, the Work is substantially completed or complete and ready for final payment.

1. CONTRACTOR shall pay OWNER for all reasonable expenditures made by OWNER for engineering and/or related services required in conjunction with the Work during the total delay.

2. CONTRACTOR, in addition, shall pay OWNER the sum of money calculated as the total delay in days multiplied by the damages per day as established in the Agreement. CONTRACTOR agrees that this sum of money includes intangible losses suffered by OWNER for public health and welfare, and like matters; and further that OWNER may institute an action for actual damages above and beyond the amounts set forth in this paragraph 12.04.B.

14.01 Schedule of Values

14.01.A. ~~The schedule of values established as provided in paragraph 2.07.A~~ Pay Items listed in the Schedule of Prices as incorporated in the Contract Documents will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Pay Items are listed solely for purposes of administration and payment of Work, and such listing does not relieve CONTRACTOR of responsibility pursuant to paragraph 3.01.B of the General Conditions or any other provisions of the Contract Documents. Progress payments on account of Unit Price Work will be based on the number of units completed as measured pursuant to paragraph 9.08.A.1.

16.01 Methods and Procedures

A. Dispute resolution methods and procedures, ~~if any~~, shall be in accordance with N.J.S.A. 40A:11-41.1 and as further set forth in the Schedule of Dispute Resolution attached hereto and made a part hereof ~~Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulation in respect of any dispute.~~

The following schedules are part of these SUPPLEMENTARY CONDITIONS:

Schedule of Insurance Requirements

SUPPLEMENTARY CONDITIONS
SCHEDULE OF INSURANCE REQUIREMENTS

Paragraphs of the General Conditions and Supplementary Conditions indicated below are supplemented to require that insurance shall be written for the greater of: (a) coverages and limits of liability required by Laws and Regulations; or (b) not less than the coverages and limits of liability set forth below.

Workers Compensation and Employers Liability, under paragraph 5.04.A.1 and 5.04.A.2 of the General Conditions, with coverages and limits of liability as required by Laws and Regulations.

General Liability, under paragraphs 5.04.A.3 through A.5, inclusive, and paragraph 5.04.B.4 of the General Conditions, with coverages including comprehensive form, premises/operations, underground explosion & collapse hazard, products completed operation, contractual, independent contractors, broad form property damage, and personal injury with limits of liability as follows:

Bodily Injury and Property Damage
\$2,000,000 combined occurrence
\$2,000,000 combined aggregate

Automobile Liability, under paragraph 5.04.A.6 of the General Conditions, with coverages including bodily injury and property damage combined with the same limits of liability as for General Liability.

Additional Insureds, under paragraph 5.04.B.1 of the General Conditions, shall be named as follows: (a) OWNER, ENGINEER, and ENGINEER's CONSULTANT as defined by name in the Agreement.

Property Insurance, under paragraph SC-5.06.A of the Supplementary Conditions, with coverages including Builder's Risk "all-risk" with limits in the amount of the Contract Price.

Boiler Insurance, under paragraph SC-5.06.B of the Supplementary Conditions, with coverages and limits as follows: NOT APPLICABLE.

SUPPLEMENTARY CONDITIONS
SCHEDULE OF REPORTS AND DRAWINGS

Copies of reports and drawings not part of the Contract Documents and listed below may be examined at the office of the Engineer at the address and during the hours set forth for Examination of Contract Documents in the Invitation to Bid.

Subsurface Conditions. Pursuant to paragraph 4.02 of the General Conditions, ENGINEER used the reports of subsurface conditions at the Site which are listed below according to date, title, preparer, and number of pages; and a description of "technical data" upon which CONTRACTOR may rely.

NOT APPLICABLE

Physical Conditions. Pursuant to paragraph 4.02 of the General Conditions, ENGINEER used the drawings of physical conditions relating to existing surface and subsurface structures (except Underground Facilities) at or contiguous to the Site which are listed below according to date, title, preparer, and number of sheets. Unless otherwise indicated below, all of the information on these drawings constitutes "technical data" upon which CONTRACTOR may rely.

NOT APPLICABLE

Hazardous Environmental Condition at Site. Pursuant to paragraph 4.06 of the General Conditions, ENGINEER used the reports of hazardous environmental condition at the Site which are listed below according to date, title, preparer, and number of pages; and a description of "technical data" upon which CONTRACTOR may rely.

NOT APPLICABLE.

SUPPLEMENTARY CONDITIONS
SCHEDULE OF DISPUTE RESOLUTION

SC-16.02 Mediation

- A. OWNER and CONTRACTOR agree that they shall submit any and all unsettled Claims or counterclaims, disputes, or other matters in question between them arising out of or relating to the Contract Documents or the breach thereof to mediation by the American Arbitration Association [prior to either of them initiating against the other a demand for arbitration pursuant to paragraph SC-16.03, unless delay in initiating arbitration would irrevocably prejudice one of the parties. The 30 day time limit within which to file a demand for arbitration as provided in paragraphs SC-16.03.B and 16.03.C shall be suspended with respect to a dispute submitted to mediation within that time limit and shall remain suspended until 10 days after the termination of the mediation.] The mediator of any dispute submitted to mediation under this agreement shall not serve as arbitrator of such dispute unless otherwise agreed.

SC-16.03 Arbitration

- B. All Claims or counterclaims, disputes, or other matters in question between OWNER and CONTRACTOR arising out of or relating to the Contract Documents or the breach thereof (except for Claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.09) not resolved under the provisions of paragraph SC-16.02 will be decided by binding arbitration in accordance with the American Arbitration Association then obtaining, subject to the limitations of this paragraph SC-16.03. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.
- C. No demand for arbitration of any Claim or counterclaim, dispute, or other matter that is required to be referred to ENGINEER initially for decision in accordance with paragraph 9.09 will be made until the earlier of: (i) the date on which ENGINEER has rendered a written decision, or (ii) the 31st day after the parties have presented their final evidence to ENGINEER if written decision has not been rendered by ENGINEER before that date. No demand for arbitration of any such Claim or counterclaim, dispute, or other matter will be made later than 30 days after the date on which ENGINEER has rendered a written decision in respect thereof in accordance with paragraph 10.05; and the failure to demand arbitration within said 30 day period will result in ENGINEER's decision being final and binding upon OWNER and CONTRACTOR. If ENGINEER renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned.

- D. Notice of the demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator, and a copy will be sent to ENGINEER for information. The demand for arbitration will be made within the 30 day period specified in paragraph SC-16.03B, and in all other cases within a reasonable time after the Claim or counterclaim, dispute, or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such Claim or other dispute or matter in question would be barred by the applicable statute of limitations.
- E. Except as provided in paragraph SC-16.03.E, no arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder, or in any other manner any other individual or entity (including ENGINEER, and ENGINEER's Consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
1. The inclusion of such or other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings; and
 3. the written consent of the other individual or entity sought to be included and of OWNER and CONTRACTOR has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.
- F. Notwithstanding paragraph SC-16.03.D, if a Claim or counterclaim, dispute, or other matter in question between OWNER and CONTRACTOR involves the Work of a Subcontractor, either OWNER or CONTRACTOR may join such Subcontractor as a party to the arbitration between OWNER and CONTRACTOR hereunder. CONTRACTOR shall include in all subcontract required by paragraph 6.06.G a specific provision whereby the Subcontractor consents to being joined in an arbitration between OWNER and CONTRACTOR involving the Work of such Subcontractor. Nothing in this paragraph SC-16.03.E nor in the provisions of such subcontract consenting to joinder shall create any claim, right, or cause of action in favor of Subcontractor and against OWNER, ENGINEER or ENGINEER's Consultant that does not otherwise exist.
- G. The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal.

Notice

TO ALL PUBLIC WORKS EMPLOYERS:

Please be advised that effective February 18, 1992 Regulation N.J.A.C. 12:60-2.1 and 6.1 of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq requires that certified payroll records must be submitted to the public body for each employee on the project. The General Contractor is responsible for ensuring that each sub-contractor submits the certified payroll within ten (10) days of the payment of wages. The public body shall receive, file and make available for inspection during normal business hours the certified payroll records.

A copy of the certified payroll form may be obtained by contacting the New Jersey Department of Labor, Division of Wage and Hour Compliance, Public Contracts Section, PO Box 389, Trenton, NJ 08625-0389, telephone (609) 292-2259.

NEW JERSEY DEPARTMENT OF LABOR PREVAILING WAGE RATE DETERMINATION

The following information applies to all rate categories in the attached Prevailing Wage Rate Determination:

KEY TO ABBREVIATIONS:

AF = Assistant Foreman Rate Per Hour	LAM = Layout Rate Per Hour
B = Benefit Rate Per Hour	LM = Lead Man Rate Per Hour
CS = Cable Splicer Rate Per Hour	PH = Probationary Helper Rate Per Hour
D = Effective Date of Wage Rate	PR = Plan Reader Rate Per Hour
DF = Deputy Foreman Rate Per Hour	RT = Radio Tower Rate Per Hour
F = Foreman Rate Per Hour	SF = Sub-Foreman Rate Per Hour
H = Helper Rate Per Hour	T = Total Rate Per Hour
J = Journeyman Rate Per Hour	

FRINGE BENEFITS:

Fringe benefits are an integral part of the prevailing wage rate and are in addition to those wages tabulated as rate per hour. Employers not paying these benefits to a payee designated in a collective bargaining agreement shall pay the benefits directly to the employee on each pay day.

ASTERISK:

When an asterisk (*) appears below a date, it indicates that there will be a future allocation between the hourly rate and the fringe benefit rate. The total rate is indicated under the future effective date.

NOTE:

SNOW PLOWING CONTRACTS ARE NOT COVERED UNDER THE NEW JERSEY PREVAILING WAGE ACT.

Contractor Registration Advisement
for Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), will become effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in section 2 of P.L. 1963, c.150 (C.34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein, except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information will be available January 2000. To be placed on our mailing list please contact:

Contractor Registration Unit
New Jersey Department of Labor
Division of Wage & Hour Compliance
P.O. Box 389
Trenton, New Jersey 08625-0389
Telephone: (609) 292-9464
Fax: (609) 633-8591
E-mail: contreg@dol.state.nj.us

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS' MARINE RATES EXPIRATION DATE: 9-30-00

NOTE: Boat crews carrying explosive material (dynamite, Pourfex, and other similar materials) shall be paid double time for hours engaged in handling of said materials.

OVERTIME PROVISION: For all hours worked above 40 per week, the hourly rate of pay shall increase by time and one half. For all hours worked on Saturday and Sunday the hourly rate of pay shall increase by time and one half. For eight (8) hours worked on a holiday, the hourly rate of pay and fringe benefit rate shall be doubled.

DIPPER AND CLAMSHELL DREDGES

	RATE	FRINGE		
EFFECTIVE DATE:	9-8-00	9-8-00		
<u>CLASSIFICATION:</u>				
OPERATOR	26.26	7.80		
OPERATOR II	21.55	7.44		
ENGINEER	23.12	7.56		
BOAT MASTER	21.74	7.45		
MAINTENANCE ENGINEER	22.07	6.87		
MATE	20.57	6.75		
WELDER	21.72	6.85		
BOAT CAPTAIN	20.72	6.77		
CHIEF OF PARTY	20.57	6.75		
OILER	17.39	5.90		
FIREMAN	17.39	5.90		

EFFECTIVE DATE:	9-8-00	9-8-00		
SCOWMAN	16.73	5.85		
RODMAN	16.73	5.85		
TUG DECKHAND	16.96	5.87		
DECKHAND	16.96	5.87		
ENTRY LEVEL: UNDER 600	HOURS	OF WORK		
OILER	12.55	4.22		
FIREMAN	12.55	4.22		
SCOWMAN	12.06	4.17		
RODMAN	12.06	4.17		
TUG DECKHAND	12.22	4.19		
DECKHAND	12.22	4.19		

HYDRAULIC DREDGES

EFFECTIVE DATE:	9-8-00	9-8-00		
CLASSIFICATION:				
LEVERMAN	25.78	7.77		
FRONT END LOADER	25.78	7.77		
DOZER OPERATOR	25.78	7.77		
LEVERMAN II	21.55	7.44		
ENGINEER	22.61	7.52		
DERRICK OPERATOR	22.61	7.52		
CHIEF MATE	22.27	7.49		
CHIEF WELDER	22.90	7.54		
ELECTRICIAN	21.92	7.46		
FILL PLACER	22.28	7.53		
ASSISTANT FILL PLACER	20.39	7.34		
BOAT MASTER	21.73	7.45		
MAINTENANCE ENGINEER	22.07	6.87		
MATE	20.57	6.75		
WELDER DREDGE	21.71	6.85		
SPIDER BARGE OPERATOR	21.52	6.84		
BOAT CAPTAIN	20.72	6.77		
STEWARD	20.52	6.76		
CHIEF OF PARTY	20.57	6.75		

EFFECTIVE DATE:	9-8-00	9-8-00		
DECKHAND	16.74	5.85		
OILER	17.39	5.90		
FIREMAN	17.39	5.90		
SHOREMAN	16.74	5.85		
RODMAN	16.74	5.85		
TUG DECKHAND	16.96	5.87		
ASSISTANT COOK	16.84	5.86		
NIGHT COOK	16.84	5.86		
MESSMAN	16.36	5.81		
JANITOR/PORTER	16.36	5.81		
THE FOLLOWING EMPLOYEES CONSIDERED MEMBERS OF	OF EACH THE	PLANT STEWARD	SHALL DEPT.	BE
STEWARD	21.49	7.43		
ASSISTANT COOK	16.84	5.86		
NIGHT COOK	16.84	5.86		
MESSMAN	16.36	5.81		
JANITOR/PORTER	16.36	5.81		
DECKHAND	12.06	4.17		
OILER	12.56	4.22		
FIREMAN	12.56	4.22		
WELDER'S HELPER	12.56	4.22		
SHOREMAN	12.06	4.17		

SUPPLEMENTAL SHEET
EFFECTIVE: APRIL 12, 2001

SHEET METAL SIGN INSTALLATION

FOLLOWING COUNTIES IN EFFECT: Bergen, Essex, Hudson, Middlesex, Monmouth,
Morris, Ocean, Passaic, Somerset, Sussex, Union

SHEET METAL SIGN INSTALLATION	D 4-12-01	4-1-02	4-1-03	EXPIRATION DATE: 3-31-04
J	22.92	23.50	24.00	
B	10.96	12.07	13.12	
T	33.88	35.57	37.12	
F	24.17	24.75	25.25	
B	10.96	12.07	13.12	
T	35.13	36.82	38.37	(60)

ASPHALT LABORERS

FOLLOWING COUNTIES IN EFFECT: BERGEN, ESSEX, HUDSON, HUNTERDON, MIDDLESEX,
MORRIS, PASSAIC, SOMERSET, SUSSEX, UNION, AND
WARREN COUNTIES

STREET	RATE	RATE	RATE
Effective Date:	4-12-01	3-1-02	3-1-03
Paving Foreman	23.55	24.30	25.05
Rakers, Screed Men	22.25	23.00	23.75
Tampers, Smoothers, Kettlemen, Painters, Shoveler & Roller Boys			
BENEFITS:	12.42	13.07	13.67

Expiration Date: 2-28-04
Job Steward to receive + .40 per hour over regular hourly wage.

SHIFT DIFFERENTIAL:
2nd and 3rd SHIFTS: +\$1.00 more per hour

OVERTIME FOR ALL CLASSIFICATIONS: (36)

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION ADDENDUM

Please refer to the appropriate county rate schedule for overtime provisions and ratio of apprentices to journeymen where applicable.

AIR CONDITIONING AND REFRIGERATION	4-10-01		EXPIRATION DATE: 7-15-01
J	23.81		
B	8.20		
T	32.01		(28)

BOILERMAKERS	D 4-10-01		EXPIRATION DATE: 7-31-01
J	31.63		
B	17.09		
T	48.72		
AF	33.63		
B	17.93		
T	51.56		
F	34.13		
B	18.14		
T	52.27		(44)

SHIFT DIFFERENTIALS: 2nd Shift: +10% per hour
3rd Shift: +20% per hour

BOILERMAKERS-MINOR REPAIRS*	D 4-10-01		EXPIRATION DATE: 7-31-01
MECHANIC	20.80		
BENEFITS	6.80		(44)

*These wage rates shall apply to all Public Works for minor repair work.
For the purpose of this section, minor work means repair work in the field where the contract amount does not exceed \$20,000.00.

SHIFT DIFFERENTIALS: 2nd Shift: +.25 per hour
3rd Shift: +.50 per hour

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION ADDENDUM

Please refer to the appropriate county rate schedule for overtime provisions and ratio of apprentices to journeymen where applicable.

LABORERS	D	4-10-01	EXPIRATION DATE: 3-31-02
(ASBESTOS LEAD HAZARDOUS WASTE REMOVAL) *	J	21.85	
	F	24.58	
	B	10.12	(13)

2nd Shift = + .25 per hour

3rd Shift = + .50 per hour

*Applies to removal of asbestos materials from walls, ceilings, floors, columns and all other non-mechanical systems including mechanical systems to be scrapped, including containment erection & demolition and placing material in appropriate containers.

LABORERS	D	4-10-01	EXPIRATION DATE: 4-30-02
(BUILDING)			
CLASS A	J	21.70	
	B	11.00	
	T	32.70	
CLASS B	J	21.20	
	B	11.00	
	T	32.20	
CLASS C	J	18.02	
	B	11.00	
	T	29.02	
	F	24.41	
	B	11.00	
	T	35.41	(7)

CLASS A: Specialist laborer including jack hammer, tamper, motorized tampers and compactors, street cleaning machines, scaffold builders, hydro demolition equipment, motorized lifts, riding motor buggy operator, conveyor operator, Bobcat operator, mortar man, burners, nozzle man on gunite work.

CLASS B: Basic laborer includes all work not included in Class A or Class C.

CLASS C: Janitorial-type light clean up work associated with the turnover of a project or part of a project to the owner.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION ADDENDUM

Please refer to the appropriate county rate schedule for overtime provisions and ratio of apprentices to journeymen where applicable.

APPRENTICE RATE SCHEDULE

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

CRAFT		INTERVAL		PERIOD AND RATES							
			1	2	3	4	5	6	7	8	9
AIR CONDITIONING & REFRIGERATION		1 to 3 months	4 to 12 months	YEARLY	2	3	4	5	6	7	
		9.52	10.71		13.10	15.48	17.86	20.24			
BOILERMAKERS		1,000 HOURS	60%	65%	70%	75%	80%	85%	90%	95%	
BUILDING LABORER		1000 Hours		12.72	14.84	16.96	19.08				
Benefits				8.25	8.25	8.25	8.25				

OVERTIME PROVISION SAME AS JOURNEYMAN

The overtime provision for apprentices is the same as the journeyman's for each specified craft. Refer to the specific craft to determine the overtime code, then refer to the overtime rate schedule

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS' RATES EXPIRATION DATE: 6-30-02

NOTE: SECOND SHIFT: + 10%

THIRD SHIFT: + 15%

	RATE	FRINGE	TOTAL		
EFFECTIVE DATE:	7-1-00	7-1-00			7-1-01
CLASSIFICATION:					
A-FRAME	29.53	15.70			46.48
ASSISTANT ENGINEER/OILER	24.28	15.70			41.23
ASPHALT CURBING MACHINE	27.62	15.70			44.57
ASPHALT PLANT ENGINEER...	27.62	15.70			44.57
ASPHALT SPREADER	27.62	15.70			44.57
AUTOGRADE- COMBINATION SUBGRADER, BASE MATERIAL SPREADER & BASE TRIMMER(CMI AND SIMILAR TYPES)	31.12	15.70			48.07
AUTOGRADE- PAVEMENT- PROFILER (CMI AND SIMILAR TYPES)	31.12	15.70			48.07
AUTOGRADE- PAVEMENT- PROFILER RECYCLE TYPE (CMI AND SIMILAR TYPES)	31.12	15.70			48.07
AUTOGRADE- PLACER-TRIMMER- SPREADER COMBINATION (CMI AND SIMILAR TYPES)	31.12	15.70			48.07
OVERTIME (3A)					

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE		TOTAL	TOTAL
	7-1-00	7-1-00			7-1-01
AUTOGRADE SLIPFORM PAVER (CMI AND SIMILAR TYPES)	31.12	15.70			48.07
AUTOGRADE CURECRETE MACHINE (CMI AND SIMILAR TYPES)	27.62	15.70			44.57
AUTOGRADE TUBE FINISHER AND TEXTURING MACHINE (CMI AND SIMILAR TYPES)	27.62	15.70			44.57
AUTOGRADE CURB TRIMMER & SIDEWALK, SHOULDER, SLIPFORM, (CMI AND SIMILAR TYPES)	27.62	15.70			44.57
BACKHOE	31.12	15.70			48.07
BACKHOE (COMBINATION)	29.53	15.70			46.48
BAR BENDING MACHINES (POWER)	27.62	15.70			44.57
BATCHERS, BATCHING PLANT & CRUSHER ON SITE	27.62	15.70			44.57
BELT CONVEYOR SYSTEMS	27.62	15.70			44.57
BOILERS & STEAM JENNIES (IRRESPECTIVE OF THEIR USE)	25.99	15.70			42.94
BOOM TYPE SKIMMER MACHINES	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE		TOTAL	TOTAL
	7-1-00	7-1-00			7-1-01
BOOM ATTACHMENT ON LOADERS	29.53	15.70			46.48
BORING AND DRILLING MACHINES	29.53	15.70			46.48
BRIDGE DECK FINISHER	27.62	15.70			44.57
BROOM & SWEEPERS	25.99	15.70			42.94
BRUSH CHOPPER, SHREDDER, TREE SHREDDER AND TREE SHEARER	29.53	15.70			46.48
BULLDOZERS (ALL)	27.62	15.70			44.57
CABLEWAYS	29.53	15.70			46.48
CAR DUMPERS (RAILROAD)	27.62	15.70			44.57
CARRYALLS	29.53	15.70			46.48
CENTRAL POWER PLANTS	31.12	15.70			48.07
CHIPPERS	25.99	15.70			42.94

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE		TOTAL	TOTAL
	7-1-00	7-1-00			7-1-01
COMPRESSOR & BLOWER TYPE UNITS (USED INDEPENDENTLY OR MOUNTED ON DUAL PURPOSE TRUCKS, ON JOB SITE OR IN CONJUNCTION WITH JOB SITE, IN LOADING & UNLOADING OF CONCRETE, CEMENT, FLY ASH, INSTANTCRETE OR SIMILAR TYPE MATERIALS)	27.62	15.70			44.57
COMPRESSOR (SINGLE)	25.99	15.70			42.94
COMPRESSORS (2 OR 3 BATTERY)	27.62	15.70			44.57
CONCRETE BREAKING MACHINE	27.62	15.70			44.57
CONCRETE CLEANING/ DECONTAMINATION	27.62	15.70			44.57
CONCRETE FINISHING MACHINE	27.62	15.70			44.57
CONCRETE PAVING MACHINE	31.12	15.70			48.07
CONCRETE PUMP	29.53	15.70			46.48
CONCRETE PUMPING SYSTEM, PUMPCRETE& SIMILAR TYPES	29.53	15.70			46.48
CONCRETE SAWS & CUTTERS (RIDE ON TYPE)	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE	TOTAL	TOTAL
	7-1-00	7-1-00		7-1-01
CONCRETE SPREADERS- HETZEL, REXOMATIC AND SIMILAR TYPES	27.62	15.70		44.57
CONCRETE SPREADER (SMALL TYPE)	25.99	15.70		42.94
CONCRETE VIBRATORS	27.62	15.70		44.57
CONVEYORS, UNDER 125 FEET	27.62	15.70		44.57
CONVEYORS, 125 FEET AND OVER	29.53	15.70		46.48
CONVEYOR LOADERS (NOT INCLUDING ELEVATOR GRADERS)	25.99	15.70		42.94
CRANES (ALL TYPES, INCLUDING OVERHEAD AND STRADDLE TRAVELING TYPE)	31.12	15.70		48.57
CRANES, GANTRY	31.12	15.70		48.57
CRANES, DERRICKS, PILE DRIVERS (ALL TYPES) WITH 100 FOOT BOOM (INCLUDING JIB AND/OR LEADS) UP TO 139 FEET	31.12	15.70		48.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE		TOTAL	TOTAL
	7-1-00	7-1-00			7-1-01
CRANES, DERRICKS, PILE DRIVERS (ALL TYPES) WITH 140 FOOT BOOM (INCLUDING JIB AND/OR LEADS) AND OVER	31.37	15.70			48.82
CRUSHING MACHINES	27.62	15.70			44.57
DERRICKS (LAND OR FLOATING)	31.12	15.70			48.57
DIRECTIONAL BORING MACHINE	27.62	15.70			44.57
DITCHING MACHINE, SMALL (DITCHWITCH, VERMEER OR SIMILAR)	27.62	15.70			44.57
DRILL DOCTOR (DUTIES INCLUDE DUST COLLECTOR, MAINTENANCE)	29.53	15.70			46.48
DRILLMASTER, QUARRYMASTER (DOWN THE HOLE DRILL) ROTARY DRILL, SELF- PROPELLED HYDRAULIC DRILL, SELF-POWERED DRILL	31.12	15.70			48.07
DOPE POTS (MECHANICAL WITH OR WITHOUT PUMP)	27.62	15.70			44.57
DRAGLINES	31.12	15.70			48.07
DRILLERS HELPER	24.28	15.70			41.23
DUMPSTERS	27.62	15.70			44.57
ELEVATOR	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE		TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00			7-1-01
ELEVATOR GRADERS	31.12	15.70			48.07
ENGINES, LARGE DIESEL (1620 HP) AND STAGING PUMP	25.99	15.70			42.94
FARM TRACTORS	25.99	15.70			42.94
FERTILIZING EQUIPMENT (OPERATION AND MAINTENANCE OF)	25.99	15.70			42.94
FIELD ENGINEERS					
CHIEF OF PARTY	27.62	15.70			44.57
TRANSIT/INSTRUMENT MAN	24.28	15.70			41.23
ROD/CHAINMAN	21.70	15.70			38.65

FINE GRADE MACHINE (SMALL TYPE)	25.99	15.70			42.94
FIREMAN	27.62	15.70			44.57
FORK LIFT (ECONOMOBILE, LULL, AND SIMILAR TYPES)	27.62	15.70			44.57
FORM LINE GRADERS (SMALL TYPE)	25.99	15.70			42.94
FRONT END LOADER (5 YARDS & OVER)	31.12	15.70			48.07

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
FRONT END LOADER (2 YARDS BUT LESS THAN 5 YARDS)	29.53	15.70		46.48
FRONT END LOADER (UNDER 1 YARD)	25.99	15.70		42.94
GENERATOR (SINGLE)	25.99	15.70		42.94
GENERATOR (2 OR 3 BATTERY)	27.62	15.70		44.57
GIRAFFE GRINDERS	27.62	15.70		44.57
GRADALLS	31.12	15.70		48.07
GRADERS (FINISH)	29.53	15.70		46.48
GRADER AND MOTOR PATROLS	27.62	15.70		44.57
GRADER, RAGO	31.12	15.70		48.07
GREASE, GAS, FUEL & OIL SUPPLY TRUCKS	25.99	15.70		42.94
GROOVE CUTTING MACHINE (RIDE ON TYPE)	29.53	15.70		46.48
GROUT PUMP	27.62	15.70		44.57
GUNNITE MACHINES (EXCLUDING NOZZLE)	27.62	15.70		44.57
HAMMER VIBRATORY (IN CONJUNCTION WITH GENERATOR)	27.62	15.70		44.57
HEATER PLANNER	29.53	15.70		46.48

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	7-1-00	7-1-00		TOTAL	TOTAL
HEATERS (NELSON OR OTHER TYPE INCLUDING	25.99	15.70			42.94
HEAVY EQUIPMENT ROBOTICS OPERATOR/TECHNICIAN	27.62	15.70			44.57
HELICOPTERS					
PILOT/ENGINEER	32.94	15.70			49.89
CO-PILOT	31.12	15.70			48.07
COMMUNICATIONS ENGINEER	31.12	15.70			48.07
HOISTS: ALL TYPE HOISTS, SHALL STEAM, GAS, DIESEL, ELECTRIC, AIR HYDRAULIC, SINGLE AND DOUBLE DRUM, CONCRETE, BRICK SHAFT CAISSON, CONVEYOR, SNORKEL, ROOF, TUGGER, AND HOUSE CARS OR ANY OTHER SIMILAR TYPE HOISTING MACHINES, PORTABLE OR STATIONARY, EXCEPT CHICAGO BOOM TYPE	29.53	15.70			46.48
HOISTS (CHICAGO BOOMS)	29.53	15.70			46.48
HOISTS (ROOF, TUGGER, AERIAL PLATFORM HOIST ELEVATORS AND HOUSE CARS)	27.62	15.70			44.57
HOPPERS	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
HOPPER DOORS (POWER OPERATED)	27.62	15.70		44.57
HYDRO BLASTER	29.53	15.70		46.48
HYDRAULIC CRANES (10 TONS AND UNDER)	29.53	15.70		46.48
HYDRO-AXE	29.53	15.70		46.48
JACKS, SCREW, AIR, HYDRAULIC, POWER OPERATED UNIT OR CONSOLE TYPE (NOT HAND JACK OR PILE LOAD TEST TYPE)	29.53	15.70		46.48
LADDERS (MOTORIZED)	27.62	15.70		44.57
LADDERVATOR	27.62	15.70		44.57
LEAD ENGINEER, FOREMAN ENGINEER, SAFETY ENGINEER (MINIMUM)	31.86	15.70		48.81
LIGHTS, PORTABLE GENERATING LIGHT PLANT	25.99	15.70		42.94
LOCOMOTIVE (LARGE)	31.12	15.70		48.07
DINKY TYPE	27.62	15.70		44.57
LOG SKIDDER	29.53	15.70		46.48
MAINTENANCE APPRENTICE (OILER)	24.28	15.70		41.23
MAINTENANCE UTILITY MAN	27.62	15.70		44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE	TOTAL	TOTAL
	7-1-00	7-1-00		7-1-01
MAINTENANCE AND REPAIR OF ASPHALT CURBING MACHINES, CONCRETE FINISHING MACHINES, CONCRETE VIBRATORS, GAS BUGGIES, LEVELING MACHINES, PORTABLE GENERATORS, POWER SAWS, COMPRESSOR EQUIPMENT OR COMPRESSOR UNITS USED IN CONNECTION WITH CEMENT, PAINT, INSULATING, CURBING AND SAND BLASTING (ALL AND SIMILAR TYPES)	27.62	15.70		44.57
MASTER ENVIRONMENTAL MAINTENANCE TECHNICIAN	27.62	15.70		44.57
MECHANIC	27.62	15.70		44.57
MECHANICS HELPER	24.28	15.70		41.23
MIXERS (EXCEPTING PAVING MIXERS)	27.62	15.70		44.57
MIXERS, CONCRETE SMALL	25.99	15.70		42.94
MOTOR PATROL AND GRADERS	27.62	15.70		44.57
MUCKING MACHINES	31.12	15.70		

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	RATE	FRINGE	TOTAL	TOTAL
	7-1-00	7-1-00		7-1-01
MULCHING EQUIPMENT (OPERATION AND MAINTENANCE OF)	25.99	15.70		42.94
OFF ROAD BACK DUMPS	25.99	15.70		42.94
PANS	29.53	15.70		46.48
PAVERS (ALL) CONCRETE	29.53	15.70		46.48
PAVEMENT AND CONCRETE BREAKER i.e. SUPERHAMMER AND HOE RAM	31.12	15.70		48.07
PAVEMENT BREAKER - SMALL, SELF-PROPELLED RIDE ON TYPE (ALSO MAINTAINS COMPRESSOR OR HYDRAULIC UNIT)	27.62	15.70		44.57
PAVEMENT BREAKER TRUCK MOUNTED	27.62	15.70		44.57
PILE DRIVER	31.12	15.70		48.07
PIPE BENDING MACHINE (POWER)	27.62	15.70		44.57
PITCH PUMP	27.62	15.70		44.57
PLASTER PUMP (REGARDLESS OF SIZE)	27.62	15.70		44.57
PLATE AND FRAME FILTER PRESS	29.53	15.70		46.48
POST HOLE DIGGER (POST POUNDER & AUGER)	27.62	15.70		44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

EFFECTIVE DATE:	7-1-00	7-1-00		TOTAL	TOTAL
PUMPCRETE - UNIT TYPE	29.53	15.70			46.48
PUMPCRETE MACHINES, SQUEEZE CRETE AND CONCRETE PUMPING (REGARDLESS OF SIZE)	29.53	15.70			46.48
PUMPS (4 INCH SUCTION AND OVER INCLUDING SUBMERSIBLE PUMPS)	25.99	15.70			42.94
PUMPS (2 INCH OR LESS THAN 4 INCH SUCTION INCLUDING SUBMERSIBLE PUMPS)	25.99	15.70			42.94
PUMPS DIESEL ENGINE AND HYDRAULIC (IMMATERIAL OF POWER)	25.99	15.70			42.94
ROAD FINISHING MACHINES (SMALL TYPE)	25.99	15.70			42.94
ROADWAY SURFACE GRINDER	31.12	15.70			48.07
ROD BENDING MACHINES (POWER)	27.62	15.70			44.57
ROLLERS - GRADE, FILL, OR STONE BASE	25.99	15.70			42.94
ROLLERS - BLACK TOP	27.62	15.70			44.57
SCALES, POWER	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
SCOOPER (LOADER & SHOVEL)	31.12	15.70		48.07
SCRAPERS	29.53	15.70		46.48
SEAMEN PULVERIZING MIXER	27.62	15.70		44.57
SEEDING EQUIPMENT (OPERATION AND MAINTENANCE OF)	25.99	15.70		42.94
SHOULDER WIDENER	27.62	15.70		44.57
SHOVELS	31.12	15.70		48.07
SIDE BOOMS	29.53	15.70		46.48
SILOS	27.62	15.70		44.57
SKIMMER MACHINES (BOOM TYPE)	27.62	15.70		44.57
SPRINKLER & WATER PUMP TRUCKS (USED ON JOBSITE OR IN CONJUNCTION WITH JOB)	25.99	15.70		42.94
SQUEEZE CRETE	29.53	15.70		46.48
STEAM JENNIES AND BOILERS (IRRESPECTIVE OF THEIR USE)	25.99	15.70		42.94
STEEL CUTTING MACHINE (SERVICE AND MAINTENANCE)	27.62	15.70		44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
STONE SPREADERS	25.99	15.70		42.94
STRADDLE CARRIERS	29.53	15.70		46.48
TAMPING MACHINES, VIBRATING RIDE-ON	25.99	15.70		42.94
TAMROCK DRILL	27.62	15.70		44.57
TEMPORARY HEATING PLANT (NELSON OR OTHER TYPE, INCLUDING PROPANE, NATURAL GAS OR FLOW TYPE UNITS)	25.99	15.70		42.94
TIRE REPAIR AND MAINTENANCE	24.28	15.70		41.23
TRACTORS	27.62	15.70		44.57
TREE CHOPPER WITH BOOM	31.12	15.70		48.07
TRENCH MACHINES	31.12	15.70		48.07
TUG CAPTAINS	27.62	15.70		44.57
TUNNEL BORING MACHINES	31.12	15.70		48.07
ULTRA HIGH PRESSURE WATERJET CUTTING TOOL SYSTEM OPERATOR/MAINTENANCE TECHNICIAN	27.62	15.70		44.57
VACUUM BLASTING MACHINE OPERATOR/MAINTENANCE TECHNICIAN	27.62	15.70		44.57
VACUUM TRUCK	29.53	15.70		46.48
VIBRATING PLANTS (USED WITH UNLOADING)	27.62	15.70		44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
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EFFECTIVE DATE:	7-1-00	7-1-00			7-1-01
WATER AND SPRINKLER TRUCKS (USE ON JOB SITE OR IN CONJUNCTION WITH JOB)	25.99	15.70			42.94
WELDER AND REPAIR MECHANIC	27.62	15.70			44.57
WELDING MACHINES (GAS DIESEL OR ELECTRIC CONVERTERS OF ANY TYPE - SINGLE: TWO OR THREE WITHIN 100')	25.99	15.70			42.94
WELDING SYSTEM - MULTIPLE (RECTIFIER TRANSFORMER TYPE)	25.99	15.70			42.94
WELLPOINT SYSTEMS (INCLUDING INSTALLATION BY BULL GANG AND MAINTENANCE)	25.99	15.70			42.94
WINCH TRUCKS (HOISTING)	29.53	15.70			46.48
WATER OPERATION: ON ALL POWER BOATS USED IN CONJUNCTION WITH PIPELINE, RIVER CROSSINGS AND ALL TYPE OF CONSTRUCTION. THE WORK PERFORMED BY THE CAPTAIN & TUG MAINTENANCE. ENGINEER SHALL BE ASSIGNED TO EMPLOYEES COVERED BY THIS AGREEMENT AND SHALL BE ASSIGNED TO EMPLOYEES COVERED BY THIS AGREEMENT AND THE FOLLOWING RATES SHALL APPLY	27.62	15.70			44.57

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
CAPTAIN (POWER BOATS)	27.62	15.70		44.57
TUG MASTER (POWER BOATS)	27.62	15.70		44.57
MAINTENANCE APPRENTICE (DECKHAND)	24.28	15.70		41.23

WORK AT HAZARDOUS WASTE SITES

ON HAZARDOUS WASTE REMOVAL OR ASBESTOS REMOVAL WORK, OR ANY STATE OR FEDERALLY DESIGNATED HAZARDOUS WASTE SITE, WHERE THE OPERATING ENGINEER IS IN DIRECT CONTACT WITH HAZARDOUS MATERIAL AND WHEN PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED FOR RESPIRATORY, SKIN AND EYE PROTECTION, THE OPERATING ENGINEER SHALL RECEIVE THE HOURLY WAGE PLUS AN ADDITIONAL TWENTY PERCENT (20%) OF THAT WAGE. FRINGE BENEFITS WILL BE PAID AT THE REGULAR RATE.

STRUCTURAL STEEL ERECTION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
AERIAL PLATFORM USED ON HOISTS	28.03	15.70		44.98
ASSISTANT ENGINEER/OILER	24.74	15.70		41.69
A-FRAME	30.69	15.70		47.64
APPRENTICE ENGINEER/OILER WITH COMPRESSOR OR WELDING MACHINE	28.03	15.70		44.98
CHERRY PICKERS - 10 TONS AND UNDER (OVER 10 TONS USE CRANE RATE)	30.69	15.70		47.64

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
CHIEF OF PARTY	28.03	15.70		44.98
COMPRESSOR (SINGLE)	26.50	15.70		43.45
COMPRESSOR (2 OR 3 IN BATTERY)	28.03	15.70		44.98
CONVEYORS & TUGGER HOISTS	28.03	15.70		44.98
CRANES (ALL CRANES - LAND OR FLOATING WITH BOOM - INCLUDING JIB, 140 FEET AND OVER ABOVE GROUND)	33.89	15.70		50.84
CRANES (ALL CRANES - LAND OR FLOATING WITH BOOM - INCLUDING JIB, LESS THAN 140 FEET ABOVE GROUND)	32.98	15.70		49.93
DERRICKS (LAND OR FLOATING) WITH BOOMS, INCLUDING JIB, 140 FEET AND OVER ABOVE GROUND	33.89	15.70		50.84
DERRICKS (LAND OR FLOATING) WITH BOOMS, INCLUDING JIB, LESS THAN 140 FEET ABOVE GROUND	32.98	15.70		49.93
ELEVATORS OR HOUSE CARS	28.03	15.70		44.98
FIREMAN	28.03	15.70		44.98

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	TOTAL
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
FORK LIFTS	28.03	15.70		44.98
GENERATORS	26.50	15.70		43.45
GENERATORS (2 OR 3)	28.03	15.70		44.98
HELICOPTERS:				
PILOT/ENGINEER	34.75	15.70		51.70
CO-PILOT	33.89	15.70		50.84
COMMUNICATING ENGINEER	33.89	15.70		50.84
HOISTS: ALL TYPE HOISTS EXCEPT CHICAGO BOOM TYPE	30.69	15.70		47.64
JACKS: SCREW AIR HYDRAULIC POWER OPERATED UNIT OR CONSOLE TYPE (NOT HAND JACK OR PILE LOAD TEST TYPE)	30.69	15.70		47.64
LEAD ENGINEER, FOREMAN ENGINEER, SAFETY ENGINEER (MINIMUM)	31.86	15.70		48.81
MAINTENANCE APPRENTICE (OILER)	24.74	15.70		41.69
MAINTENANCE UTILITY MAN	28.03	15.70		44.98
ROD BENDING MACHINE (POWER)	28.03	15.70		44.98
ROD CHAINMAN	21.70	15.70		38.65
SIDE BOOMS	30.69	15.70		47.64
STRADDLE CARRIER	30.69	15.70		47.64

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

	RATE	FRINGE	TOTAL	
EFFECTIVE DATE:	7-1-00	7-1-00		7-1-01
TRANSIT/ INSTRUMENT MAN	24.74	15.70		41.69
WELDING MACHINES, GAS, DIESEL, OR ELECTRIC CONVERTERS OF ANY TYPE - SINGLE	26.50	15.70		43.45
WELDING MACHINES, GAS OR ELECTRIC CONVERTERS ON ANY TYPE - 2 OR 3 IN BATTERY INCLUDING DIESELS	28.03	15.70		44.98
WELDING SYSTEM, MULTIPLE (RECTIFIER TRANSFORMER TYPE)	26.50	15.70		43.45
WATER OPERATION:				
CAPTAIN (POWER BOATS)	28.03	15.70		44.98
TUG MASTER (POWER BOATS)	28.03	15.70		44.98
MAINTENANCE APPRENTICE (DECKHAND)	24.74	15.70		41.69

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

TEST BORING PRELIMINARY TO CONSTRUCTION

THE DRILLER SHALL BE EMPLOYED ON ALL WORK KNOWN AS CORE DRILLING, DIAMOND DRILLING, MUD DRILLING, PIPE DRIVING AND SETTING, SOUNDING WASH BORING, POUNDING, PROVING, TESTBORING, SHOT DRILLING, AUGER DRILLING FOR SOUNDING OR TEST BORING AND ON ANY WORK PERFORMED ON LAND OR WATER USED IN CONNECTION WITH SUCH ACTIVITIES, WHICH ARE PRELIMINARY TO THE CONSTRUCTION TRADES, INCLUDING THE MOVING, HAULING, LOADING AND UNLOADING OF SUCH EQUIPMENT BY VEHICLES AND THE OPERATION THEREOF.

EFFECTIVE DATE:	7-1-00		7-1-01
JOURNEYMAN	24.74		*
HELPER	24.28		*
BENEFITS	15.70		*
OVERTIME	(5)		(5)
TOTAL JNYMAN			41.69
TOTAL HELPER			41.23

HAZARDOUS WASTE DIFFERENTIAL:

LEVEL A: 1.00/HOUR; LEVEL B: .75/HOUR; LEVEL C: .25/HOUR

DRILL FOR GROUND WATER SUPPLY

EFFECTIVE DATE	7-1-00		7-1-01
DRILLER **	24.74		*
B	15.70		*
T	40.44		41.69
HELPER (1-120 Days)	12.10		*
B	15.70		*
T	27.80		29.05
HELPER (121 Days to 1 Year)	14.95		*
B	15.70		*
T	30.65		31.90
HELPER (1 Year to 3 Years)	16.25		*
B	15.70		*
T	31.95		33.20
HELPER	24.28		
B	15.70		
T	39.98		41.23
OVERTIME (39)			

***+1.00 PER HOUR EACH FOR WELDING COURSE AND DRILLER LICENSE.

WHEN DRILLING WORK REQUIRES PERSONAL PROTECTIVE EQUIPMENT EQUAL TO OSHA LEVEL "A" THERE IS A \$3.00 PER HOUR PREMIUM; LEVEL "B" \$2.00 PER HOUR; LEVEL "C" \$1.00 PER HOUR.

THE WELL DRILLER AND/OR HIS HELPERS MAY PERFORM ALL OF THE LABOR RELATIVE TO THE CONSTRUCTION, FINISHING, AND SERVICING OF WELLS, PUMPS AND BORINGS FOR GROUND WATER SUPPLY. THE PRESENT METHODS OF WELL DRILLING ENTAILING, AS THEY DO, MANY DIVERSE JOB OPERATIONS CALLING FOR DRILLING, PUMP DISCHARGE, PIPINGS, AND THE OPERATION OF THE VARIOUS DIFFERENT TYPES OF RELATED POWER WQUIPMENT, SHALL ALL BE PROPERLY WITHIN THE JOB DUTIES AND FUNCTIONS OF THE WELL DRILLER AND/OR HIS HELPERS. IN THE EVENT THAT AN EXTENSION OF WORK SHOULD OCCUR BEYOND WATER WELL DRILLING FUNCTIONS AND INTO THE FIELD OF GENERAL CONSTRUCTION WORK, SUCH EXTENSION OF WORK WOULD COME UNDER THE APPROPRIATE RATES LISTED EXSEWHERE IN THIS WAGE DETERMINATION.

NOTE: MARINE AND DREDGING RATES ARE AVAILABLE UPON REQUEST.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

EFFECTIVE DATE	D 4-10-01	3-1-02	3-1-03	
BLASTER	26.55	27.30	28.05	
GENERAL FOREMAN	24.55	25.30	26.05	
FINISHER FOREMAN CONCRETE FOREMAN	24.50	25.25	26.00	
PIPE FOREMAN AND GRADE FOREMAN	24.00	24.75	25.50	
DRILL FOREMAN	23.80	24.55	25.30	
LABOR FOREMAN, ASPHALT FOREMAN	23.55	24.30	25.05	
FINISHER, RAMMER, PAVER GUNNITE NOZZLE MAN, STONE- CUTTER, FORM SETTER MANHOLES, CATCH BASINS, INLET BUILDER	23.00	23.75	24.50	
TIMBERMAN WAGON DRILL OPERATOR , DRILL MASTER DIRECTIONAL DRILL OPERATOR	22.75	23.50	24.25	
SEWER PIPE, LASER MEN CONDUIT AND DUCT LINE LAYER, POWER TOOL OPERATOR,JACK HAMMER, CHIPPING HAMMER, PAVEMENT BREAKER,POWER BUGGY, CONCRETE CUTTER, ASPHALT CUTTER,SHEET HAMMER AND TREE CUTTER OPERATORS,SAND BLASTING, CUTTING,BURNING AND OTHER POWER TOOLS	22.55	23.30	24.05	
FRINGE BENEFIT RATE	12.42	13.07	13.67	

SHIFT DIFFERENTIAL: + \$1.00 per hour

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

EFFECTIVE DATE	D 4-10-01	3-1-02	3-1-03	
WAGON DRILL OPERATOR HELPER, DRILL MASTER HELPER, POWDER CARRIER & MAGAZINE TENDER, SIGNAL MAN	22.25	23.00	23.75	
BASIC LABORER, LANDSCAPE LABORER, RAILROAD TRACK LABORER, FLAGMAN, TRAFFIC DIRECTOR, SALAMANDER TENDER PITMAN, DUMP MAN, WATERPROOFING, RAKERS & TAMPERS ON COLD PATCH WORK, WRAPPING AND COATING OF ALL PIPE	22.05	22.80	23.55	
FRINGE BENEFIT RATE	12.42	13.07	13.67	

SHIFT DIFFERENTIALS: + \$1.00 per hour

TOXIC OR HAZARDOUS 3.00 PER HOUR OVER REGULAR APPLICABLE HOURLY WAGE
WASTE LABORER RATE IN ZONES A, B OR C, 1.00 PER HOUR OUTSIDE ZONES A, B, C

FREE AIR TUNNEL JOBS

	D 4-10-01	3-1-02	3-1-03	
WALKING BOSSES AND SUPERINTENDANTS	24.80	25.55	26.30	
HEADING FOREMAN, SHAFT FOREMAN, ROD FOREMAN, ELECTRICIAN FOREMAN, RIGGING FOREMAN	24.50	25.25	26.00	
FRINGE BENEFIT	12.42	13.07	13.67	

SHIFT DIFFERENTIAL: + \$1.00 per hour

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

EFFECTIVE DATE	D 4-10-01	3-1-02	3-1-03	
IRON FOREMAN, CAULKING FOREMAN, FORM FOREMAN CEMENT FINISHING FORE- MAN, CONCRETE FOREMAN, TRACK FOREMAN, CLEANUP FOREMAN, GROUT FOREMAN	24.00	24.75	25.50	
BLASTERS	26.50	27.25	28.00	
TOP LABOR FOREMAN	23.45	24.20	24.95	
SKILLED MEN (INCLUDING MINERS, DRILL RUNNERS IRON MEN, CONVEYOR MEN MAINTENANCE MEN, SAFETY MINERS, RIGGERS, BLOCK LAYERS, CEMENT FINISHER, TOD MEN, CAULKERS, POWDER CARRIERS, ALL OTHER SKILLED MEN)	23.10	23.85	24.60	
SEMI-SKILLED MEN (INCLUDING MINERS' HELPER, CHUCK TENDERS, TRACK MEN, NIPPERS, BRAKE MEN, DERRAIL MEN, CABLE MEN HOSE MEN, GRAVEL MEN, FORM MEN, BELL OR SIGNAL MEN TOP OR BOTTOM, FORM WORKERS, AND MOVERS CONCRETE WORKERS, SHAFT MEN, TUNNEL LABORERS, CAULKERS HELPER, ALL OTHER SEMI- SKILLED MEN)	22.95	23.70	24.45	
FRINGE BENEFIT	12.42	13.07	13.67	

SHIFT DIFFERENTIAL: + \$1.00 per hour

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

EFFECTIVE DATE	D 4-10-01	3-1-02	3-1-03	
ALL OTHERS (INCLUDING POWDER WATCHMEN, CHANGE HOUSE ATTENDANTS, TOP LABORS	22.45	23.20	23.95	
FRINGE BENEFIT	12.42	13.07	13.67	

SHIFT DIFFERENTIAL: + \$1.00 per hour

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

OCEAN COUNTY

ASPHALT LABORERS

ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, GLOUCESTER, MERCER, MONMOUTH
OCEAN, AND SALEM COUNTIES:

STREET	RATE	RATE	RATE	RATE
Effective Date:	6-26-98	3-1-99	9-1-99	3-1-00
Paving Foreman	21.40	21.90	21.90	22.40
Head Raker	21.05	21.55	21.55	22.05
Rakers, Screed Men	20.90	21.40	21.40	21.90
Tampers, Smoothers, Kettlemen, Painters, Shoveler & Roller Boys	20.65	21.15	21.15	21.65
TRAINEES** (STARTING RATE)	13.90	13.90	13.90	13.90
BENEFITS:	10.75	11.15	11.40	11.65

Expiration Date: 2-28-01

Job Steward to receive +.40 per hour over regular hourly wage.

OVERTIME FOR ALL CLASSIFICATIONS: (36)

SHIFT DIFFERENTIAL: 2nd and 3rd Shifts: +.75 more per hour

*Trainee rates listed above apply to the first fifteen weeks of employment. Thereafter, said rate shall increase to 75% of rakers rate for fifteen additional weeks. After the thirty week training period, the employee will then be paid at the full raker's rate. The trainee rate may only be paid to the fifth man on a four man asphalt laborer's paving crew.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

BURLINGTON, HUNTERDON, MERCER, MIDDLESEX, MONMOUTH, OCEAN AND SOMERSET COUNTIES

CRAFT

TRUCK CLASSIFICATION;

RATE;

EFFECTIVE DATE:	5-1-00
Helper on Asphalt Distributor, Pick-Up and Dump Truck Drivers, Winch Straight Truck Drivers, Water and Fuel Truck Drivers	26.35
Straight Three-Axle Material Driver	26.40
Tractor Trailer Truck Driver	26.50
Euclid Type Vehicles (Except Self Loading)	26.50
Winch Trailer Driver	26.60
Mechanic Helper	26.12
Benefits	11.835
Overtime Code	(40)

Truck Foreman: \$.25 cents per hour above regular rate. Overtime shall be increased accordingly.

EXPIRATION DATE 4-30-01

HAZARDOUS WASTE REMOVAL: (+ \$3.00 premium per hour)

On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin and eye protection, the driver shall receive an additional \$3.00 per hour on the hourly wage rate. A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an hourly wage rate plus \$1.00 per hour.

MATERIAL DELIVERY DRIVERS	D 6-23-99
NEW HIRES	
FIRST 6 MONTHS	12.00
AFTER 6 MONTHS	12.50
AFTER 2 YEARS	13.00
AFTER 3 YEARS	14.00
BENEFITS	6.98
OVERTIME	(5)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

AIR CONDITIONING & REFRIGERATION - See Statewide Addendum Schedule

HEAT & FROST INSULATORS ASBESTOS WORKERS**		7-1-00	7-1-01	7-1-02	EXPIRATION DATE: 6-30-03
J		28.34	*	*	
B		14.91	*	*	
T		43.25	44.50	45.75	
F		29.34	*	*	
B		14.91	*	*	
T		44.25	45.50	46.75	
ABATEMENT HELPERS					
FIRST LEVEL	H	19.56	*	*	
	B	6.21	*	*	
	T	25.77	27.02	28.27	
SECOND LEVEL	H	20.27	*	*	
	B	14.91	*	*	
	T	35.18	36.43	37.68	(35)

SHIFT DIFFERENTIAL: 2nd Shift: +15% 4:00 PM-12:00AM

3rd Shift: +20% 12:00 AM-8:00 AM

MATERIAL ASBESTOS HANDLER TO JOURNEYMAN RATIO: 5 TO 1 WITH
A MINIMUM OF 2 2ND LEVEL HANDLERS MAKING UP THE RATIO

**Also applies to the removal of insulation materials/asbestos from mechanical systems including containment erection & demolition and placing material in appropriate containers.

BOILERMAKERS - See Statewide Addendum Schedule

BOILERMAKERS-MINOR REPAIRS - See Statewide Addendum Schedule

BRICKLAYERS STONE MASONS	D 11-1-00	EXPIRATION DATE: 10-31-01
J	27.85	
DF	30.45	
F	33.05	
B	13.70	(53)

SHIFT DIFFERENTIALS: 2nd Shift: +15% (8 hrs pay for 7.5 hrs work)

3rd Shift: +20% (8 hrs pay for 7 hrs work)

CARPENTERS	D 5-1-00	5-1-01	EXPIRATION DATE: 4-30-02
J	28.46	29.30	
B	12.42	12.78	
T	40.88	42.08	
F	32.73	33.69	
B	14.28	14.69	
T	47.01	48.38	(51)

2nd Shift = additional 15% (8 hours pay for 7.5 hours work)

3rd Shift = additional 25% (8 hours pay for 7 hours work)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

CARPENTERS, RESILIENT FLOORING	D 5-15-00	EXPIRATION DATE: 4-30-01
	J 27.51	
	B 10.84	
	T 38.35	
	F 29.59	
	B 11.66	
	T 41.25	(43)

Shift Differentials: +15% per hour

CEMENT MASONS, CEMENT FINISHERS

SAME AS BRICKLAYERS

DIVERS	D 7-1-00	D 7-1-01	D 7-1-02	D 7-1-03	EXPIRATION DATE: 6-30-04
DIVER	31.44	*	*	*	
B	16.14	*	*	*	
T	47.58	49.43	51.38	53.33	
TENDER	26.20	*	*	*	
B	16.14	*	*	*	
T	42.34	44.19	46.14	48.09	(58)

DOCKBUILDERS/PILED RIVERMEN	D 7-1-00	D 7-1-01	D 7-1-02	D 7-1-03	EXPIRATION DATE: 6-30-04
	J 26.20	*	*	*	
	B 16.14	*	*	*	
	T 42.34	44.19	46.14	48.09	
	F 31.44	*	*	*	
	B 16.14	*	*	*	
	T 47.58	49.43	51.38	53.33	(58)

DRYWALL FINISHERS	D 10-12-00	5-1-01	5-1-02	5-1-03	5-1-04	5-1-05	EXPIRATION DATE: 4-30-06
	J 28.50	29.20	29.90	30.60	31.30	32.05	
	F 31.35	32.15	32.90	33.65	34.45	35.25	
	B 27½+3.10	27½+3.40	27½+3.70	27½+4.00	27½+4.30	27½+4.60	(24)

ELECTRICIAN**	6-26-98	5-31-99	5-29-00	EXPIRATION DATE: 5-27-01
CS, J	28.83	29.89	30.95	
PR	30.27	31.38	32.50	
(2-10 W)F	31.72	32.89	34.05	
B	18½+7.13	18½+7.13	18½+7.13	
OVERTIME 1 ½	B 18½+10.62	18½+10.62	18½+10.62	
2X	B 18½+14.11	18½+14.11	18½+14.11	(5)

HEIGHT WORK: Any work performed 40 feet above ground or floor: +10%

SECOND SHIFT: +10% (8 HOURS PAY FOR 7 ½ HOURS WORK) 4:30 PM TO 12:30 AM

THIRD SHIFT: + 15% (8 HOURS PAY FOR 7 HOURS WORK) 12:30 AM TO 8:00 AM

** ALSO APPLIES TO FIRE AND BURGLAR ALARM WORK

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

ELECTRICIAN-TELEDATA		D 1-12-01		EXPIRATION DATE: 5-27-01
MASTER TECH./GEN. FOREMAN		31.49		
(31+ Workers on job)	B	13.07		
	T	44.56		
SENIOR TECH./ASST. GEN. FOREMAN		28.82		
(21-30 Workers on job)	B	11.96		
	T	40.78		
TECHNICIAN A /GENERAL		27.61		
(11-20 Workers on job)	B	11.46		
	T	39.07		
TECHNICIAN B/FOREMAN		26.40		
(4-10 Workers on job)	B	10.96		
	T	37.36		
TECHNICIAN C /JOURNEYMAN		24.22		
(1-3 Workers on job)	B	10.05		
	T	34.27		(5)

These rates are for service, maintenance, moves, and/or changes affecting 15 instruments or less. These rates are not to be used for fiber optic work or new construction. The number of workers on a jobsite is the determining factor to which Foreman category applies. HEIGHT WORK: Any work performed 40 feet above ground or floor: +10%
SHIFT DIFFERENTIALS:

SECOND SHIFT: +10% (8 HOURS PAY FOR 7 ½ HOURS WORK) 4:30 PM TO 12:30 AM
THIRD SHIFT: + 15% (8 HOURS PAY FOR 7 HOURS WORK) 12:30 AM TO 8:00 AM

-NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS			OVERTIME
ELECTRICIAN-TELEDATA	D	1-12-01	EXPIRATION DATE: 5-27-01
MASTER TECH./GEN. FOREMAN		35.32	
(31+ Workers on job)	B	14.99	
	T	50.31	
SENIOR TECH./ASST. GEN. FOREMAN		34.43	
(21-30 Workers on job)	B	14.83	
	T	49.26	
TECHNICIAN A /GENERAL		33.54	
(11-20 Workers on job)	B	14.67	
	T	48.21	
TECHNICIAN B/FOREMAN		32.65	
(4-10 Workers on job)	B	14.51	
	T	47.16	
TECHNICIAN C /JOURNEYMAN		29.68	
(1-3 Workers on job)	B	13.97	
	T	43.65	(5)

These rates are for service, maintenance, moves, and/or changes affecting 16 instruments or more. These rates are to be used for fiber optic work or new construction involving teledata equipment only.

The number of workers on a jobsite is the determining factor to which Foreman category apply. HEIGHT WORK: Any work performed 40 feet above ground or floor: +10%

SHIFT DIFFERENTIALS:

SECOND SHIFT: +10% (8 HOURS PAY FOR 7 ½ HOURS WORK) 4:30 PM TO 12:30 AM

THIRD SHIFT: + 15% (8 HOURS PAY FOR 7 HOURS WORK) 12:30 AM TO 8:00 AM

ELEVATOR CONSTRUCTORS		7-11-00	EXPIRATION DATE: 5-31-01
J		33.395	
F		37.57	
H		23.38	
6 MONTHS	PH	16.70	
UNDER 5 YEARS	B	6%+6.99	
OVER 5 YEARS	B	8%+6.99	(2)

HELPER TO JOURNEYMAN RATIO 1:1 EXCEPT ON JOBS WHERE TWO TEAMS ARE WORKING, ONE EXTRA HELPER MAY BE EMPLOYED FOR THE FIRST TWO TEAMS AND AN EXTRA HELPER FOR EACH ADDITIONAL THREE TEAMS. FURTHER, THE EMPLOYER MAY USE AS MANY HELPERS AS NEEDED UNDER THE DIRECTION OF A JOURNEYMAN IN WRECKING OLD PLANTS, HANDLING AND HOISTING MATERIAL, AND ON FOUNDATION WORK. WHEN REMOVING OLD AND INSTALLING NEW CABLES ON EXISTING ELEVATORS, EMPLOYER MAY USE TWO HELPERS TO ONE MECHANIC.

ON ELEVATOR SERVICE THE OVERTIME CODE IS (5), AND THE HELPER TO JOURNEYMAN RATIO: 1:3

GLAZIERS	10-1-97	5-1-98	5-1-99	5-1-00	EXPIRATION DATE: 4-30-01
J	27.43	27.83	28.25	28.75	
F	28.93	29.33	29.75	30.25	
B	9.52	10.12	10.36	10.47	(3)
HAZARD/HEIGHT PAY: +\$1.00 OVER 20 FEET					

-NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

IRONWORKERS	12-20-00	7-1-01		EXPIRATION DATE: 6-30-02
STRUCTURAL				
J	27.28	*		
B	22.25	*		
T	49.53	51.53		
F	29.28	*		
B	22.25	*		
T	51.53	53.53		
ROD				
J	25.78	*		
B	22.25	*		
T	48.03	50.03		
F	27.78	*		
B	22.25	*		
T	50.03	52.03		(30)

SHIFT DIFFERENTIALS: 2nd Shift: +15% (8 hrs pay for 7.5 hrs work)

3rd Shift: +20% (8 hrs pay for 7 hrs work)

Hazardous waste removal work, on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: +\$3.00 per hour

LABORERS (ASBESTOS, LEAD, & HAZARDOUS WASTE) - See Statewide Addendum Schedule

LABORERS (BUILDING) - See Statewide Addendum Schedule

LATHERS; SAME AS CARPENTERS;
MASONS; SAME AS BRICKLAYERS;
MILLWRIGHTS SAME AS CARPENTERS

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS							OVERTIME
PAINTERS	D 10-12-00	5-1-01	5-1-02	5-1-03	5-1-04	5-1-05	EXPIRATION
J	28.50	29.20	29.90	30.60	31.30	32.05	DATE 4-30-06
F	31.35	32.15	32.90	33.65	34.45	35.25	
B	27½+3.10	27½+3.40	27½+3.70	27½+4.00	27½+4.30	27½+4.60	
SPRAY/SANDBLASTING /HIGH WORK							
J	31.00	31.95	32.90	33.65	34.45	35.25	
F	33.85	35.40	36.20	37.15	37.90	38.00	
B	27½+3.10	27½+3.40	27½+3.70	27½+4.00	27½+4.30	27½+4.60	(9)
PAINTERS (REPAINT)							
J	22.00	22.50	23.00	23.50	24.00	24.55	EXPIRATION
F	24.20	24.75	25.30	25.85	26.40	27.00	DATE 4-30-06
B	27½+3.10	27½+3.40	27½+3.70	27½+4.00	27½+4.30	26½+4.60	
SPRAY/SANDBLASTING /HIGH WORK							
J	24.20	24.75	25.30	25.85	26.40	27.00	
F	26.80	27.20	27.85	28.45	29.05	29.70	
B	27½+3.10	27½+3.40	27½+3.70	27½+4.00	27½+4.30	27½+4.60	
							(56)
BRIDGE/TUNNEL/TANK							
Equipment Tender/Containment Builder	80% of Journeyman						
Support Personnel	65% of Journeyman				(56)		

On jobs where no major alterations occur, and not more than 3 other trades are present, but excluding bridges, stacks, elevated tanks, and generating stations.

PAINTERS LINE STRIPING	D	1-22-97	7-1-97	7-1-98	7-1-99	EXPIRATION DATE: 6-30-00
	J	23.30	23.71	24.58	25.48	
	F	23.80	24.21	25.08	25.98	
1ST YEAR	H	17.50	17.78	18.43	19.11	
2ND YEAR	H	18.67	18.97	19.66	20.38	
3RD YEAR	H	19.83	20.15	20.89	21.66	
	B	1.50	1.70	1.90	2.05	(38)

PAPERHANGERS SAME AS PAINTERS
PIPEFITTERS SAME AS PLUMBERS
PLASTERERS SAME AS BRICKLAYERS

PLUMBERS	2-26-99	7-1-99	7-1-00	EXPIRATION DATE: 6-30-01
J	29.58	30.78	31.98	
B	14.05	14.30	14.50	
T	43.63	45.08	46.48	
F	31.65	32.93	34.22	
B	14.05	14.30	14.50	
T	45.70	47.23	48.72	(36)

SECOND SHIFT +25% (8 HOURS PAY FOR 7 ½ HOURS WORK)

THIRD SHIFT +30% (8 HOURS PAY FOR 7 ½ HOURS WORK)

MAINTENANCE WORK:

SECOND SHIFT + 15% (8 HOURS PAY FOR 7 1/2 HOURS WORK)

THIRD SHIFT + 15% (8 HOURS PAY FOR 7 HOURS WORK)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

ROOFERS	5-1-00	5-1-01	5-1-02	5-1-03	5-1-04	5-1-05	EXPIRATION DATE: 4-30-09
J	24.65	25.50	*	*	*	*	
B	12.80	12.55	*	*	*	*	
T	37.45	38.05	39.05	40.05	41.05	42.05	
F	25.65	26.50	*	*	*	*	
B	12.80	12.55	*	*	*	*	
T	38.45	39.05	40.05	41.05	42.05	43.05	
MOPPER & FELT LAYING MACHINES SLAG DISPENSER:							
J	25.15	26.00	*	*	*	*	
B	12.80	12.55	*	*	*	*	
T	37.95	38.55	39.55	40.55	41.55	42.55	
ROOFERS	5-1-06	5-1-07	5-1-08				
J	*	*	*				
B	*	*	*				
T	43.05	44.05	45.05				
F	*	*	*				
B	*	*	*				
T	44.05	45.05	46.05				
MOPPER & FELT LAYING MACHINES SLAG DISPENSER:							
J	*	*	*				
B	*	*	*				
T	43.55	44.55	45.55				(64)

ROOFERS	5-5-00	EXPIRATION DATE: 4-30-01
SHINGLE, SLATE & TILE	.	Slater & Slaters Helper wages shall be \$1.00 over applicable rate. 1 Helper to 2 Journeymen
J	19.75	
B	6.77	
T	26.52	
F	20.00	
B	6.77	
T	26.77	
4 OR MORE MEN	F	20.75
	B	6.77
	T	27.52
	H	9.88
	B	6.77
	T	16.65
		(64)

SHEET METAL	2-4-98	6-1-98	6-23-99	EXPIRATION DATE: 5-31-00
WORKERS				
J	28.00	*	30.00	
B	13.79	*	15.31	
T	41.79	43.29	45.31	
F	29.50	*	31.50	
B	13.79	*	15.31	
T	43.29	44.79	46.81	(11)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS

OVERTIME

SHEET METAL SIGN INSTALLATION			4-1-00	EXPIRATION DATE: 3-31-01
J			20.48	
B			9.51	
T			29.99	
F			21.73	
B			9.51	
T			31.24	(60)

SPRINKLER FITTERS	1-1-98	4-10-98	1-1-99	4-1-99	1-1-00	EXPIRATION DATE: 3-31-00
J	27.55	27.27	27.77	30.65	30.65	
F	29.05	29.27	29.27	32.15	32.15	
B	6.35	6.85	6.40	6.40	6.45	(28)

TILE SETTERS (NORTH)	D 10-12-00	11-6-00	5-7-01	11-5-01	5-6-02	11-4-02	EXPIRATION DATE: 11-03-03
J	31.27	31.97	32.47	32.97	33.57	33.57	
B	15.86	16.41	16.91	17.41	18.06	19.31	
T	47.13	48.38	49.38	50.38	51.63	52.88	(25)

TILE FINISHERS (HELPERS) NORTH	D 10-12-00	12-1-00	6-1-01	12-1-01	6-1-02	EXPIRATION DATE: 11-30-03
H	26.91	27.26	27.76	28.25	28.72	
B	12.71	12.71	12.96	13.47	14.25	
T	39.62	39.97	40.72	41.72	42.97	
D	12-1-02					
H	29.27					
B	14.50					
T	43.77					(25)

TILE SETTERS- MARBLE (NORTH)	10-12-00	11-1-00	7-1-01	1-1-02	7-1-02	1-1-03	EXPIRATION DATE: 12-31-03
J	29.32	30.33	31.34	32.35	33.66	34.96	
B	21.15	21.20	21.35	21.60	21.65	21.80	
T	50.47	51.53	52.69	53.95	55.31	56.76	(25)

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
COUNTY - OCEAN

CRAFTS		OVERTIME
TILE SETTERS MOSAIC-TERRAZZO (NORTH)	D 10-12-00	EXPIRATION DATE: 9-30-01
J	32.48	
B	17.67	
T	50.15	
Assistant/Grinder	31.17	
B	17.67	(25)
T	48.84	

WELDERS SAME RATE AS CRAFT TO WHICH WELDING IS INCIDENTAL;

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

CRAFT		INTERVAL		PERIOD AND RATES									
			1	2	3	4	5	6	7	8	9	10	
ASBESTOS WORKERS	YEARLY		45%	55%	65%	75%	80%						
BRICK LAYER	6 MONTHS		13.93	15.32	18.10	20.89	23.67	26.46					
	BENEFITS		2.25	2.25	9.09	10.19	11.30	12.40					
CARPENTERS	6 MONTHS		45%	50%	55%	60%	65%	70%	80%	90%			
	BENEFITS		39% + .15										
INDENTURED	AFTER MAY 1, 1997:												
	6 MONTHS		40%	45%	50%	55%	65%	75%	85%	95%			
	BENEFITS		39% + .15										
CARPENTERS RESILIENT FLOORING	Yearly		11.00	13.76	16.50	22.01							
Indentured after 5-1-97	BENEFITS		4.37	5.45	6.52	8.68							
CEMENT FINISHERS & MASONS	6 MONTHS		50%	55%	60%	70%	80%	90%					
	BENEFITS		2.13	2.13	8.17	9.31	10.45	11.59					
DOCKBUILDER	6 MONTHS		60%	65%	70%	75%	80%	85%					
DIVERS	BENEFITS		13.15										

Drywall Finishers: See Painter Apprentice Rates

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

CRAFT		INTERVAL		PERIOD AND RATES									
				1	2	3	4	5	6	7	8	9	10
ELECTRICIAN	1st YEAR		1st 1000 HOURS	35%	2ND 1000 HOURS	40%							
	BENEFITS			18% + 4.40		18% + 4.61							
	OVERTIME	1 1/2 X		18% + 5.79		18% + 6.00							
	OVERTIME	2 X		18% + 7.18		18% + 7.39							
	2ND YEAR		1ST 750 HOURS	45%	2ND 750 HOURS	50%							
	BENEFITS			18% + 4.82		18% + 5.03							
	OVERTIME	1 1/2 X		18% + 6.21		18% + 6.42							
	OVERTIME	2 X		18% + 7.60		18% + 7.81							
	3RD YEAR		3500 - 4250 HOURS	55%	4250 - 5000 HOURS	60%							
	BENEFITS			18% + 5.24		18% + 5.45							
	OVERTIME	1 1/2 X		18% + 6.63		18% + 6.84							
	OVERTIME	2 X		18% + 8.02		18% + 8.23							
	4TH YEAR		5000 - 6500 HOURS	70%									
	BENEFITS			18% + 5.87									
	OVERTIME	1 1/2 X		18% + 7.26									
	OVERTIME	2 X		18% + 8.65									
	5TH YEAR		6500 - 8000 HOURS	85%									
	BENEFITS			18% + 6.50									
	OVERTIME	1 1/2 X		18% + 7.89									
	OVERTIME	2 X		18% + 9.28									

Apprentice Rates for 15 instruments or less ...

Electrician- Teledata	6 Months	1 st -6 mos.	2 nd -6 mos.	3 rd -6 mos.	4 th -6 mos.	5 th -6 mos.	6 th -6 mos.
Rate		10.90	11.63	12.84	14.29	15.99	17.44
Benefits		4.52	4.83	5.33	5.93	6.64	7.24
Total		15.42	16.46	18.17	20.22	22.63	24.68

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

CRAFT	INTERVAL	PERIOD AND RATES										
		1	2	3	4	5	6	7	8	9	10	

Apprentice Rates for 16 instruments or more ...

Electrician-Teledata	6 Months	1 st -6 mos.	2 nd -6 mos.	3 rd 6 mos.	4 th -6 mos.	5 th -6 mos.	6 th -6 mos.	4 th -Year	5 th Year		
Rate		10.39	11.87	13.36	14.84	16.32	17.81				
Benefits		7.68	7.95	8.68	8.95	9.69	9.96				
	Yearly										
Rate								20.78	25.23		
Benefits								10.96	12.47		

GLAZIERS	6 MONTHS	30%	35%	40%	45%	50%	55%	60%	65%	75%	85%
	BENEFITS	4.75	6.59	6.85	7.11	7.38	7.64	7.90	8.16	8.69	9.21

IRONWORKERS	6 MONTHS	50%	50%	60%	70%	80%	90%				
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MILLWRIGHTS SAME AS CARPENTERS

PAINTER	4 MONTHS	30%	40%	50%	60%	70%	75%	80%	85%	90%	
	BENEFITS	YEAR 1: 13%	YEAR 2: 18% + .50			YEAR 3: 22% + 1.00					

PIPEFITTERS	YEARLY	35%	45%	55%	65%	75%					
	BENEFIT	10.07	12.95	15.83	18.71	21.59					

PLASTERERS	6 MONTHS	50%	55%	65%	75%	85%	95%				
	BENEFIT	2.13	2.13	8.17	9.31	10.45	11.59				

PLUMBERS	YEARLY	11.19	14.39	17.59	20.79	23.99					
	BENEFIT	8.91	9.77	10.63	11.49	12.35					

ROOFERS	YEARLY	47%	52%	60%	75%						
	BENEFITS	6.32	7.07	12.55	12.55						

SHEET METAL WORKERS	YEARLY	15.00	18.00	21.00	24.00						
	BENEFIT	8.49	8.49	12.58	13.49						

SHEET METAL SIGN INSTALLATION	6 Months	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
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SPRINKLER FITTER	6 MONTHS	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%
	BENEFITS	3.58	3.58	3.58	3.58	5.78	5.78	5.78	5.78	5.78	5.78

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

			1	2	3	4	5	6	7	8	9	10
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STONE MASON	6 MONTH		50%	55%	65%	75%	85%	95%				
	BENEFIT		2.13	2.13	8.17	9.31	10.45	11.59				

TILE SETTER/TILE FINISHERS	HOURS	1-750	751- 1500	1501- 2250	2251- 3000	3001- 3750	3751- 4500
Rate		50%	55%	65%	75%	85%	95%

Includes all tile, marble, and mosaic-terrazzo

The overtime provision for apprentices is the same as the journeyman's for each specified craft. Refer to the specific craft to determine the overtime code, then refer to the overtime rate schedule.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

ESTABLISHMENT OF RATIO OF APPRENTICES TO JOURNEYMEN FOR PUBLIC WORK PROJECTS, N.J.A.C.
12:60-7.

"Apprentice" means an individual who, while performing work on a public work project, is registered, in good standing, in an apprenticeship program approved or certified by the New Jersey State Director, Bureau of Apprenticeship and Training, United States Department of Labor.

If there is no ratio of apprentices to journeymen for a particular craft, then the ratio of apprentice to journeymen shall be one apprentice to every four journeymen.

If there is no apprentice rate provided, the employer shall pay the employees not less than the journeyman rate even if an employee is registered in an apprentice program for that trade.

RATIO OF APPRENTICES TO JOURNEYMEN

CRAFT	RATIO	CRAFT	RATIO
AIR CONDITIONING & REFRIGERATION	1:4	IRONWORKER-BRIDGE CABLE SPINNING	1:1
ASBESTOS WORKER	1:4	IRONWORKER	1:5
BOILERMAKER	(1) *	MOSAIC-TERRAZZO SETTER	1:5
BRICKLAYER	1:4	MILLWRIGHT	1:5
BUILDING LABORER	(5)	PAINTER	1:4
CARPENTER	1:5	PIPEFITTER	1:4
CARPENTERS RESILIENT FLOORING	(2) *	PLASTERER	1:4
CEMENT MASON	1:4	PLUMBER	1:4
CEMENT FINISHER	1:4	ROOFER	(4) *
DOCKBUILDER	1:4	SHEETMETAL WORKER	1:3
DRYWALL FINISHER	1:4	SPRINKLER FITTER	1:1
ELECTRICIAN	(3) *	STONE MASON	1:4
GLAZIER	1:2	TELEDATA	1:3
		TILE/MARBLE SETTER	1:4

* See Below:

- (1) BOILERMAKER: (One apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.
- (2) CARPENTERS RESILIENT FLOORING: One apprentice shall be allowed to every two journeymen or major fraction thereof. No more than three apprentices on any one job or project.
- (3) ELECTRICIAN: One First Year Apprentice to one Apprentice to three Journeymen; 1 Apprentice, 1 Journeyman; 1 First Year Apprentice, 1 Apprentice, 1 Journeyman; 1 First Year Apprentice, 1 Apprentice, 2 Journeymen; 1 First Year Apprentice, 1 Apprentice, 3 Journeymen; 1 First Year Apprentice, 2 Apprentices, 4 Journeymen; 2 First Year Apprentices, 2 Apprentices, 4 Journeymen.
- (4) ROOFER: 1:2, 2:4, 3:6, 4:8, 5:10, 6:12, 7:14.
- (5) BUILDING LABORER: Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than one (1) apprentice for each additional three (3) journeymen.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
4-10-01

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (1) Time and one-half the rate including benefits for the first two hours before or after the regular 8 hour day Monday through Friday, and time and one-half for the first 10 hours on Saturday. All work on Sunday and Holidays and all hours over and above the first 10 hours, Monday through Saturday, shall be paid at double the rate, including benefits. On scheduled overtime (e.g. six 10 hour days, etc.) an employee shall not receive overtime until they have worked forty hours. If forty hours straight time is not available because of a holiday or anytime not available through no fault of the employee, such as weather, this rule shall not apply.
- (2) Double the hourly rate for all hours worked in excess of 8 a day and for all hours on Saturdays, Sundays and Holidays.
- (3) Time and one-half the hourly rate after 8 hours a day Monday through Thursday. Double the hourly rate after 8 hours on Friday and double the hourly rate for all hours worked on Saturdays, Sundays and Holidays.
- (3a) Time and one-half the hourly rate after 8 hours per day and for all hours on Saturday. Double time for all hours on Sundays and Holidays. The double time rate shall also apply for all hours of overtime and for Saturday work on water crossings pertaining to all bi-state pipeline work, bi-state tunnel and bi-state bridge construction, alteration or resurfacing work on bi-state projects. When working with other trades who receive a higher rate of overtime, the machine operator will also receive the higher rate. The benefit rate is increased accordingly for time and one-half work or double time. Where the bid documents and/or Contract require the Employer to work restricted hours or for any mutually agreed reason an Employer may work four (4) ten (10) hour days at the straight time rate during a week. If Friday is worked time and one-half (1 1/2) will be paid for all hours.
 - (a) Where Saturdays, Sundays or Holidays (or days celebrated as such) are worked, the employees covered shall be paid on a unit basis of one day at the specified overtime rates.
- (4) Time and one-half the hourly rate after 8 hours a day and for all hours on Saturdays, Sundays and Holidays.
- (5) Time and one-half the hourly rate after 8 hours per day and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays.
- (6) Time and one-half the hourly rate after 7 hours per day on new work, and 8 hours per day on old re-roofing work. Time and one-half for all hours of work on Saturdays, Sundays and Holidays.
- (7) Time and one-half the hourly rate over 8 hours per day and for all hours on Saturday. Double the hourly rate for all hours on Sundays and Holidays. Benefits on overtime hours are paid at time and one-half. If 32 hours or less are worked due to weather conditions during the week, Saturday hours (up to a total of 40 hours per week) may be paid at straight time. Time and one-half would then be paid after 40 hours on Saturday. Four 10 hour days may be worked, and the fifth day may be used as a make-up day for hours lost due to weather conditions. Straight time may be paid for hours up to forty.
- (8) Time and one-half including benefits for the hours worked from the end of the 8 hour workday until Midnight, Monday through Friday and for 8 hours worked on Saturday. All other work performed outside the regular scheduled working hours and work on Sundays and Holidays shall be paid for at double the straight time rate of pay including benefits.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
4-10-01

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (9) Time and one-half the hourly rate after 8 hours per day and 40 hours per week. Double the hourly rate on Sundays and Holidays. In the event work is lost due to weather or job conditions, work may be accomplished on Saturday and Sunday at the regular straight time rate to make up for the lost time.
- (10) Double the hourly rate, including benefits, for all hours worked in excess of 7 a day and for all hours on Saturdays, Sundays and Holidays.
- (11) Double the hourly rate, including benefits, for all hours worked in excess of 8 a day and for all hours on Saturdays, Sundays and Holidays.
- (12) Time and one-half the hourly rate for all hours worked in excess of 7 a day, and double the rate for all hours on Saturdays, Sundays and Holidays. All fringe benefits on overtime shall be paid at one and one-half the fringe benefit rate. Whenever any of the other basic building trades work an 8th hour at straight time, employees in this craft will work the 8th hour at straight time.
- (13) Time and one-half the hourly rate including benefits for all hours over 8 in a day. Double time for all hours on Saturdays, Sundays and Holidays. Benefits on double time work are paid at time and one-half.
- (14) Time and one-half for the first 2 hours of overtime after 8 hours on Mondays through Fridays (except in Atlantic City where all overtime hours are double time.) Double time thereafter. Double time for all hours on Saturdays, Sundays and Holidays.
- (15) Time and one-half the hourly rate for all hours over 8 Monday through Friday. Double the hourly rate for all hours on Saturdays, Sundays and Holidays. Benefits are paid straight time for all hours worked per week.
- (16) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 10 hours on Saturdays; double time thereafter. Double time for all hours on Sundays and Holidays.
- (17) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 10 hours on Saturdays, double time thereafter. Double time on Sundays and Holidays. When overtime is worked, fringe benefits shall be double time or time and one-half, depending on the overtime rate.
- (18) Eight hour day, forty hour week (Monday through Sunday inclusive.) All work over eight (8) hours in any one day or all work over forty (40) hours in any one week shall be paid at the rate of time and one-half.
- (19) Time and one-half the hourly rate over 8 hours per day and 40 hours per week, and for all hours on Saturday. Double the hourly rate for all hours on Sundays and Holidays.
- (20) Time and one-half the hourly rate including benefits for all hours over 8 in a day, and for the first 8 hours on Saturday. Double the hourly rate including benefits for all other overtime. Double the hourly rate including benefits on Holidays.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

4-10-01

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (21) Time and one-half the hourly rate after 8 hours per day and all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays. Saturday may be used as a make up day when an employee on his own accord fails to work on any day of the work week Monday through Friday. Then such employee, if he works on Saturday of the week during the week of the absence, shall be paid the straight time rate, provided that all time worked before and after the established 8 hour work day Monday through Saturday or more than 40 hours of straight time work per week shall be paid one and one-half time the wage rate. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (22) Time and one-half the hourly rate after eight (8) hours per day and forty (40) hours per week. Time and one-half for hours worked on Saturdays. Double time for all hours worked on Sundays and Holidays. Whenever any other crafts are working overtime and are receiving double time for overtime, double time shall be paid.
- (23) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 8 hours on Saturdays; double time thereafter. Double time on Sundays and Holidays.
- (24) Time and one-half the hourly rate for all overtime hours after 7 or 8 hours per day (at the option of the employer) and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays.
- (25) Time and one-half the hourly rate including benefits after 7 hours per day and double the hourly rate including benefits for all hours on Saturdays, Sundays and Holidays.
- (26) Time and one-half the hourly rate including benefits after 8 hours per day. Double the hourly rate including benefits for all hours on Saturdays, Sundays and Holidays.
- (27) Time and one-half the hourly rate including benefits for the 9th and 10th hours on Monday through Friday, double time including benefits thereafter. Time and one-half the rate including benefits for the first 8 hours on Saturday. Double time including benefits thereafter. Double time including benefits for all hours on Sundays and Holidays.
- (28) The work day shall be 8 hours, or shall conform to the practice on the job site. Four days at ten hours a day may be worked at straight time. All hours in excess of the designated workday shall be considered overtime. All overtime except for Sundays and Holidays shall be at the rate of time and one-half. All hours on Sundays and Holidays shall be at double time.
- (29) Time and one-half the hourly rate including benefits for the first two hours of overtime after 8 hours per day, double time thereafter. Double time including benefits for all hours on Saturdays, Sundays and Holidays.
- (30) Time and one-half the hourly rate including benefits after 8 hours per day and Saturdays. Double the hourly rate including benefits for all hours on Sundays and Holidays.

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OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (31) Time and one-half after eight hours for the first four hours of overtime including benefits on Mondays through Fridays, remaining time at double time. The first eight hours on Saturdays shall be at time and one-half including benefits, the remaining time at double time. Double time including benefits for all hours on Sundays and Holidays. Four (4) consecutive ten (10) hour days may be worked at the straight time hourly rate; Monday through Thursday with Friday as a make-up day at the straight time rate of pay or Tuesday through Friday with Saturday as the make-up day at the straight time rate of pay.
- (32) Time and one-half the hourly rate including benefits for all hours over 8 in a day. Double time for all hours on Saturdays, Sundays and Holidays. Benefits on double time work are paid at time and one-half.
- (33) Time and one-half the hourly rate for all hours over 8 per day and forty hours per week. Double the hourly rate on Sundays irrespective of the amount of hours worked during the week. If workers are given 24 hours notice Monday through Saturday, the first 2 hours of overtime after 8 hours may be paid at + 10% of the regular hourly pay rate. Sunday work may be paid at time and one-half the hourly rate provided at least two days notice is given.
- (34) Time and one-half the hourly rate for all hours over eight (8) on Mondays through Fridays, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays. Triple the hourly rate for all hours on Holidays.
- (35) Time and one-half the hourly rate for all hours over eight (8) from Monday to Friday, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and observed Holidays, except Labor Day which is triple the hourly rate.
- (36) Time and one-half the hourly rate after 8 hours per day and Saturdays. Double the hourly rate on Sundays and Holidays. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (37) Double the hourly rate for all hours over 7 per day, and for all hours on Saturdays and Sundays. Triple the hourly rate for all hours on Holidays.
- (38) Time and one-half the hourly rate for all hours over 8 per day, and for all hours on Saturdays and Sundays. Double time and one-half for all hours on Holidays.
- (39) Time and one-half the hourly rate over 8 hours per day and 40 hours per week. Double time on Sundays, and double time and one-half for all hours on Holidays.
- (40) Time and one-half the hourly rate after 8 hours per day Monday thru Friday, and time and one-half for all hours on Saturdays. Double time and one-half the rate of pay on Sundays, and double time on Holidays. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (41) Time and one-half the hourly rate including fringe benefits for the first two (2) hours worked after 8 hours per day Monday through Friday, and time and one-half the hourly rate including fringe benefits for the first 10 hours on Saturday. All other hours of work, except for Holidays, shall be paid at double the rate including benefits. Double the hourly rate including benefits on Sundays and Holidays, and Triple the hourly rate including benefits on Labor Day, Christmas Day, New Year's Day and Easter Sunday.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
4-10-01

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (42) Time and one-half the hourly rate for the first two hours after 8 hours per day, double time thereafter. Time and one-half for the first 8 hours on Saturday, double time thereafter. Double time on Sundays and Holidays. Workers may work 4 ten hour days. When working 4 ten hour days, the first two hours after 10 hours per day are at time and one-half. The first 10 hours on the fifth day are at time and one-half. All other overtime hours are at double time. For weeks in which an employee switches from eight hour to ten hour work days or ten hour to eight hour work days, the overtime rate of time and one-half shall apply for work over forty hours. All other overtime shall be at double time including Sundays and Holidays.
- (43) Time and one-half the hourly rate including fringe benefits over 7 hours per day and on Saturdays. Double time including benefits on Sundays and Holidays. Whenever any of the other basic building trades work an 8th hour at straight time, employees in this craft will work the 8th hour at straight time.
- (44) Time and one-half the hourly rate after 8 hours Mondays through Fridays, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays. If any other craft employed by the same employer or subcontractor is receiving double time in lieu of the time and one-half, they shall receive the double time automatically.
- (45) Time and one-half the hourly rate including benefits for all overtime hours over 7 per day Mondays through Fridays. At the discretion of the employer, employees may work an 8 hour day. Double the hourly rate including benefits on Saturdays, Sundays and Holidays.
- (46) Eight hours shall constitute the regular work day. Any two hours of overtime per day, Monday through Friday, shall be at time and one-half including benefits. Any other overtime shall be at double time the rate including benefits. All work performed on Saturdays and Sundays shall be paid at double the rate including benefits. All work performed on Holidays by a Journeyman shall be at double time including benefits. Foreman working on a Holiday receive double time for hours worked plus 8 hours holiday pay including benefits.
- (47) Double the hourly rate for all hours over 7 in a day, and double the hourly rate for all hours on Saturdays, Sundays and Holidays. When the majority of workers on a project are working an 8 hour day, the workers of this craft may work an 8 hour day if agreed by the majority of workers.
- (48) Time and one-half the hourly rate including benefits after 8 hours per day and for all hours on Saturdays. Double the hourly rate including benefits for all hours on Sundays and Holidays. Workers may work 4 ten hours days, Monday through Thursday at straight time pay. Friday shall be used as a make-up day. If Friday is not a make-up day, all hours are at time and one-half the hourly rate including benefits.
- (49) Double the hourly rate for all hours over 8 in a day and over 40 in a week. Double the hourly rate on holidays. On heavy and highway and utility construction work, use overtime code (36).
- (50) Time and one-half the hourly rate over 8 hours per day and 40 hours per week. Time and one-half the rate for all hours on Saturday. Double the hourly rate on Sundays and Holidays. Whenever the majority of other crafts work a shorter workday, members of this craft will work the shorter day. During Daylight Savings Time, hours can be worked at 4 ten hour days at straight time. All time over 40 hours will be paid at the time and one-half rate.

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OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (51) Time and one-half Monday through Fridays after 8 hours per day and for all hours on Saturdays including benefits; Sundays & Holidays shall be double time including benefits. In the event a Carpenter is working overtime with one of the following trades: Bricklayers & Allied Craftworkers, Locals No. 4 & 5; Northern New Jersey District Council of Ironworkers; Ironworkers Local No. 68; Operating Engineers Local No. 825; or New Jersey Building Laborers, who receive double time, then in that case the Carpenters shall also receive double time. Four (4) ten hour days may be worked, when mutually agreed. Monday through Thursday at straight time pay. Friday shall be used as a make-up day at straight time for days lost due to inclement weather or for other mutually agreed reasons. If Friday is not a make-up day, all hours worked on Friday shall be paid at time and one-half including benefits. In all other instances, five eight-hour days shall be worked Monday through Friday at straight time pay.
- (52) Time and one-half the hourly rate including benefits over 8 hours per day Monday through Friday and over 40 hours per week. Time and one-half the hourly rate for all hours on Saturdays, Sundays and Holidays. If work is held up because of weather, holidays (excluding Labor Day), or other unavoidable delay, employees may work up to 8 hours on Saturday, at the regular rate to make up and complete a 40 hour week.
- (53) The first two hours of overtime after 8 hours per day, Monday through Friday shall be at the double time rate. All other overtime after the first two hours, and all hours on Saturdays shall be at time and one-half. Double time for all hours on Sundays and Holidays. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (54) The first hour of overtime after 8 hours per day, Monday through Friday shall be at the double time rate. All other overtime after the first hour, and all hours on Saturdays shall be at time and one-half. Double time for all hours on Sundays and Holidays. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (55) All time worked before and after the established 8 hour day, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half. All hours worked on Sundays and Holidays shall be paid at the double time rate. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (56) The standard work day of eight (8) hours for the job or portion thereof to which any such change of starting time applies shall begin with such agreed starting time, unless the Local Collective Bargaining Agreement allows for four (4) ten (10) hour days in which case the overtime and the shift requirements for this will be locally agreed to with a copy of such agreement filed with the appropriate signatures in the Brotherhood offices.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION
4-10-01

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (57) The regular work week shall consist of five (5) days of eight (8) hours each exclusive of the meal period, Monday through Friday with time and one half (1 ½) after (8) hours and time and one half after forty hours, and on Saturdays. When all trades agree at the inception of project, workers may work four (4) ten (10) hour days. All hours worked over ten (10) hours per day and forty (40) hours per week shall be paid at time and one half (1 ½). Time is computed from the time of the employee's arrival at the job site or yard, as ordered by the Employer, until the time of his leaving.
- (58) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 8 hours on Saturdays; double time thereafter. Double time on Sundays and Holidays. When mutually agreed the employees may be required to work four (4) ten (10) hour at the straight time wage and fringe benefit rate. These four (4) ten (10) hour shall be Monday through Thursday, unless inclement weather prevents work on any such day in which event Friday shall be a make-up day at the straight time wage and fringe benefit rate. In the event that the four (4) ten (10) days situation is implemented the following conditions shall still prevail: (1) The foreman shall still be guaranteed a minimum of eight (8) hours (wages and fringe benefits); (2) The show up time for employees shall be the same as during a regular work week. (3) The following overtime provisions shall be in effect: any hours worked in excess of ten (10) Monday through Thursday shall be at the double time rate; any hours worked in excess of forty (40) on Friday up to ten (10) hours shall be at the time and one-half (1 1/2) rate.
- (59) Time and one half after 8 hours Monday to Friday, time and one half for all hours on Saturday and Sunday. Holiday work is regular holiday pay plus regular hourly rate of pay.
- (60) All hours worked before 8:00a.m. and after 4:30p.m. during the regular work week shall be paid at the rate of time and one-half. All hours worked on Saturday between 8:00a.m. and 4:30p.m. shall be paid at the rate of time and one-half. All hours worked on Sunday shall be paid at the rate of double time. All hours worked on Saturday before 8:00a.m. and after 4:30p.m. shall be paid at the rate of double time. Holiday pay shall be double time for hours worked plus 8 hours straight time.
- (61) The work week shall consist of forty (40) hours, five (5) eight (8) hour days or four (4) ten (10) hour days when practical. Time and one-half time shall be paid for work performed beyond eight (8) hours in any five (5) day, eight (8) hour per day work week and beyond ten (10) hours in any four (4) day, ten (10) hour per day work week. Worker may work four (4) ten (10) hour days Monday thru Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be at time and one half. Time and one-half for Saturday and for work done beyond forty (40) hours in the regular work week. Riding time to and from the garage is included in the eight (8) hours. Double time for work on Sundays and holidays.
- (62) Time and one half, including fringe benefits, for all hours over 8 Monday to Friday. Time and one half, including fringe benefits, for all hours up to 10 worked on Saturday. Double time, including fringe benefits, for all hours over 10 on Saturdays and all hours worked on Sundays and holidays.
- (63) Time and one-half the hourly rate after 8 hours per day and for the first 10 hours on Saturday. Double time after 10 hours on Saturday and for all hours on Sundays and Holidays.

NEW JERSEY DEPARTMENT OF LABOR
PREVAILING WAGE RATE DETERMINATION

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OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (64) Time and one half the hourly rate before 5:00am and after 4:30pm or in excess of 8 hours per day Monday to Friday. Time and one half the hourly rate for all hours worked on Saturday, Sunday and holidays.
- (65) Time and one half the hourly rate of pay in excess of 8 hours per day Monday through Friday and for all hours worked on Saturday. The fringe benefit rate for time and one half shall be \$25.76. Double time the hourly rate of pay for all hours worked on Sunday and holidays. The fringe benefit rate for double time shall be \$31.59.



STATE OF NEW JERSEY
DEPARTMENT OF LABOR
DIVISION OF WAGE & HOUR COMPLIANCE

Donald T. DiFrancesco
Acting Governor

PO Box 389
Trenton, New Jersey 08625-0389

Mark Boyd
Commissioner

APRIL 24, 2001
LISTED CONTRACTORS AND SUBCONTRACTORS

PURSUANT TO N.J.S.A. 34:11-56.37 AND 34:11-56.38 – PREVAILING WAGE ACT

NO PUBLIC WORKS CONTRACT MAY BE AWARDED TO ANY OF THE FOLLOWING CONTRACTORS AND SUBCONTRACTORS OR TO ANY FIRM, CORPORATION OR PARTNERSHIP IN WHICH THEY HAVE AN INTEREST UNTIL THE EXPIRATION DATE GIVEN.

<u>CONTRACTOR AND SUBCONTRACTOR</u>	<u>ADDRESS</u>	<u>EXPIRATION DATE:</u>
78 CONSTRUCTION CORP.	7 EDGE RD., PO BOX 940, ALPHA, NJ 08865	08-18-02
RICHARD W. KING, PRES./TREAS.	18 BELLIS RD., MILFORD, NJ 08848	08-18-02
RONALD J. KING, V.P./SEC.	8 SHARK RD., MILFORD, NJ 08848	08-18-02
AAC CONSTRUCTION	114 MACARTHUR AVE., GARFIELD, NJ 07026	07-24-01
FILLIPPO AIELLO SR., PARTNER	114 MACARTHUR AVE., GARFIELD, NJ 07026	07-24-01
FILLIPPO AIELLO JR., PARTNER	114 MACARTHUR AVE., GARFIELD, NJ 07026	07-24-01
CIRO D'AMOTO, PARTNER	122 MACARTHUR AVE., GARFIELD, NJ 07026	07-24-01
A&A GOMES CONSTRUCTION CO.	140 HARPER ST., NEWARK, NJ 07030	10-20-01
ANTONIO M. GOMES, PRES.	121 S. MIDLAND AVE., KEARNY, NJ 07032	10-20-01
ANTONIO GOMES, JR., V.P.	121 S. MIDLAND AVE., KEARNY, NJ 07032	10-20-01
A.C.T. ARCHITECTURAL WOODWORK, INC.	647 MARSHALL ST., ELIZABETH, NJ 07206	11-01-03
DERICK PASZKOWSIC, VICE PRES.	112 W. JERSEY ST., ELIZABETH, NJ 07206	11-01-03
ANTHONY PRIOLO, EXEC. VICE PRES.	647 MARSHALL ST., ELIZABETH, NJ 07206	11-01-03
A. C. CONTRACTING, INC.	2146 LORI DR., WILMINGTON, DE 19808	04-12-02
E. ANDREW WILSON, PRES.	2146 LORI DR., WILMINGTON, DE 19808	04-12-02
ACT CONSTRUCTION	378 N. ARLINGTON AVE., E. ORANGE, NJ 07017	06-21-02
CLARENCE WILLIAMS, PRES.	378 N. ARLINGTON AVE., E. ORANGE, NJ 07017	06-21-02
A.S.T. GENERAL CONTRACTING	638 WASHINGTON AVE, DEPTFORD, NJ 08096 PO BOX 284, COLLINGSWOOD, NJ 08107	05-14-02
AFONSO & PREVEL CONTRACTING CORP.	326 WOODLAND PL., LEONIA, NJ 07605	04-10-03
KAY PREVLIANAKIS, PRESIDENT	326 WOODLAND PL., LEONIA, NJ 07605	04-10-03
ANTONIO AFONSO, VICE PRESIDENT	326 WOODLAND PL., LEONIA, NJ 07605	04-10-03

ARLENE CONSTRUCTION V. A. BAIARDI, PRES.	PO BOX 5758, CLARK, NJ 07066 1441 RARITAN RD., CLARK, NJ 07066	01-15-02 01-15-02
ARMCO ROOFING CO. ANTHONY MARTIN, OWNER	25 DEER RUN DR. SOUTH, BARNEGAT, NJ 08005 25 DEER RUN DR. SOUTH, BARNEGAT, NJ 08005	03-10-03 03-10-03
ASPINO ELECTRIC ANIBAL J. OSPINO, PRESIDENT	328 GRAFTON AVE., NEWARK, NJ 07104 196 BROADWAY, BAYONNE, NJ 07302	01-15-02 01-15-02
ATLAS COMMERCIAL INTERIORS JOHN LOCKMAN, PRESIDENT	BOX 48, ROUTE 77, MULLICA HILL, NJ 08062 361 BRIDGETON PIKE, MULLICA HILL, NJ 08062	07-19-01 07-19-01
BARBAGLI CONSTRUCTION KENNETH BARBAGLI, OWNER	149 S. MAIN ST., ELMER, NJ 08318 149 S. MAIN ST., ELMER, NJ 08318	09-16-01 09-16-01
BARTEX CONSTRUCTION CO. BARTLOMIE STEFANCZUK, OWNER	672 HUFF AVE., MANVILLE, NJ 08835 672 HUFF AVE., MANVILLE, NJ 08835	06-02-02 06-02-02
BEDROCK CURB & WALK, LLC STEPHANIE VOGEL, PRESIDENT	351 PFISTER RD., JACKSON, NJ 08527 31 SUNNYSIDE RD., HOWELL, NJ 07731	05-16-03 05-16-03
BERGEN MASONRY, INC. LEO P. IPPOLITO, JR., PRESIDENT	452 HUDSON TERR., ENGLEWOOD CLIFFS, NJ 07632 32 ANDOVER AVE., DUMONT, NJ 07650	01-11-03 01-11-03
BOZEN ZIETARA	551 FOX CHASE RD., HOLLYWOOD PA 19046	02-19-02
BRADLEY ELEVATOR CO. JOSEPH BRADLEY, PRES. FRANK SCARPO, SEC-TREAS.	43 N. DAY ST., ORANGE, NJ 07051 663 FRANKLIN AVE., #252, NUTLEY, NJ 07110 432 GRAYLOCK PKWY, BELLEVILLE, NJ 07104 2 MIDWOOD PL., WAYNE, NJ 07470	10-14-01 10-14-01 10-14-01
BRODER CONSTRUCTION DEAN BRODER, OWNER	342 S. HOPE CHAPTER ST., JACKSON, NJ 08527 342 S. HOPE CHAPTER ST., JACKSON, NJ 08527	07-24-01 07-24-01
CMC PLUMBING & HEATING CO. JOSEPH CURIAZZA, PRESIDENT	1839 CELESTE DR., WALL, NJ 07719 1839 CELESTE DR., WALL, NJ 07719	11-15-03 11-15-03
C&S MASONRY SAM CARAVELLI, OWNER	119 NEWARK-POMPTON TPK., PEQUANNOCK NJ 07440 119 NEWARK-POMPTON TPK., PEQUANNOCK NJ 07440	11-30-02 11-30-02
CHAMPION FIRE PROTECTION EDWIN CARL, PRESIDENT	522 RT. 9 N., SUITE 248 MANALAPAN NJ 07726 1519 EDMERE RD., WALL, NJ 07719	03-10-02 03-10-02
CHARLES YOUNGKIN INSTALLERS CHARLES YOUNGKIN, PRESIDENT	PO BOX 1351, WILLIAMSTOWN, NJ 08094 201 TRUMAN AVE., WILLIAMSTOWN, NJ 08094	09-20-02 09-20-02

COLUBRIALE & SON, INC.	277 SHELL RD., CARNEYS PT., NJ 08069	05-16-03
DONNA COLUBRIALE, PRESIDENT	PO BOX 343, WOODSTOWN, NJ 08098	05-16-03
RICHARD HERRERO, VICE PRES./SEC.	806 WINSLOW RD., WILLIAMSTOWN, NJ 08094	05-16-03
COMMERCIAL & INDUSTRIAL DOORS, INC.	510 JAMES ST., LAKEWOOD, NJ 08701	08-10-02
LOUIS RUDD, PRESIDENT	510 JAMES ST., LAKEWOOD, NJ 08701	08-10-02
CONTROL CONSTRUCTION INC. T/A MASON CONTRACTORS	15 MARLIN AVE. W EDISON, NJ 08818	10-01-01
CARMINE MAZZA, OWNER	15 MARLIN AVE. W EDISON, NJ 08818	10-01-01
COONEY AUTOMATIC SPRINKLER CO	1501 SOUTH NEW RD., PLEASANTVILLE, NJ 08232	10-29-01
ROGER T. COONEY III, PRES.	1501 SOUTH NEW RD., PLEASANTVILLE, NJ 08232	10-29-01
CUSTOM WELDING	PO BOX 764, NEPTUNE, NJ 07753	08-10-02
WILLIAM CHICK, OWNER	301 W. SYLVERIA AVE., NEPTUNE, NJ 07753	08-10-02
CUTRUPI & CO.	260 LAFAYETTE PL., ENGLEWOOD, NJ 07631	05-21-01
VINCENT D. CUTRUPI, PRES.	750 RIVERVALE RD., RIVERVALE, NJ 07661	05-21-01
DDAPP & SONS CONSTRUCTION	902 LAMBERTON ST., TRENTON, NJ 08638	09-03-01
PATRICIA PEREZ, PRESIDENT	902 LAMBERTON ST., TRENTON, NJ 08638	09-03-01
DKD CONSTRUCTION ENTERPRISES, INC.	2207 ROUTE 130, DAYTON, NJ 08810	04-24-04
DIMITRIOS DIMITRAKIS, PRESIDENT	691 MAGNOLIA RD., NO. BRUNSWICK, NJ 08902	04-24-04
MIKE DIMITRAKIS, VICE PRESIDENT	41 CRABAPPLE LN., FRANKLIN PARK, NJ 08823	04-24-04
DRF CONTRACTING, INC.	PO BOX 227, HIGH BRIDGE, NJ 08829	04-12-02
DON FREELS, PRESIDENT	23 MARYLAND AVE., HIGH BRIDGE, NJ 08829	04-12-02
DAN TEDESCHI CO.	135 MAPLE AVE., W. PATERSON, NJ 07424	06-21-02
DAN TEDESCHI, Pres.	281 Rt. 46 West, Elmwood Park, NJ 07407	06-21-02
DANIEL CONSTRUCTION, INC.	135 HEADLEY TERR., IRVINGTON, NJ 07111	11-01-03
DANIEL MORAN, OWNER	135 HEADLEY TERR., IRVINGTON, NJ 07111	11-01-03
DAVID MOROQUINS, OWNER	135 HEADLEY TERR., IRVINGTON, NJ 07111	11-01-03
DREAM BUILDERS	1240 E. STATE ST., TRENTON, NJ 08609	12-02-01
BENJAMIN R. SEABROOK, PRES.	1240 E. STATE ST., TRENTON, NJ 08609	12-02-01
E. R. CONTRACTING	903 R CATHERINE ST., PT. PLEASANT, NJ 08742	08-18-02
ERIK RODBERG, OWNER	903 R CATHERINE ST., PT. PLEASANT, NJ 08742	08-18-02
EAST ATLANTIC CONSTRUCTION, INC.	PO BOX P, SEASIDE PARK, NJ 08752	11-08-03
TED FAXON, PRESIDENT	1436 BAY VIEW AVE., SOUTH SEASIDE PARK, NJ 08752	11-08-03
CHAD CAMERON, VICE PRESIDENT	1027 INDIAN HILL RD., TOMS RIVER, NJ 08753	11-08-03

EDERICK POE CONTRACTORS	66 PROSPECT ST., TRENTON, NJ 08618	01-14-02
EDERICK POE, OWNER	66 PROSPECT ST., TRENTON, NJ 08618	01-14-02
EDIFER CONSTRUCTION CO., INC.	1007 LAFAYETTE ST., ELIZABETH, NJ 07206	02-01-03
AIRES LITAO, PRESIDENT	1007 LAFAYETTE ST., ELIZABETH, NJ 07206	02-01-03
ERDMAN ROOFING CO., INC.	501 N. BELLEVIEW AVE., CINNAMINSON NJ 08077	06-14-03
RICHARD ERDMAN, PRESIDENT	22 YANSICK DR., DELRAN, NJ 08075	06-14-03
EVELYN ERDMAN, ASST. VICE PRES.	22 YANSICK DR., DELRAN, NJ 08075	06-14-03
JOAN ERDMAN, VICE PRESIDENT	831 LEXINGTON DR., TURNERSVILLE NJ 08012	06-14-03
EDWARD ERDMAN, TREASURER	831 LEXINGTON DR., TURNERSVILLE NJ 08012	06-14-03
EXCELL BUILDERS	PO BOX 284, 321 CATTELL AVE. COLLINGSWOOD, NJ 08107	05-14-02
EXOTEC, INC.	PO BOX 123, WESTVILLE, NJ 08096	03-15-02
MICHAEL HARTLEY, PRESIDENT	39 EDISON RD., CHERRY HILL, NJ 08034	03-15-02
FAS-TECH CONSTRUCTION SVCS., INC.	360 GREENTREE RD., SEWELL, NJ 08080	04-01-02
GINO FASOLINO, PRESIDENT	360 GREENTREE RD., SEWELL, NJ 08080	04-01-02
MARY LOU MCGURKIN, SECRETARY	360 GREENTREE RD., SEWELL, NJ 08080	04-01-02
FRAZER ELECTRIC SERVICE CO.	705 PARK AVE., SUITE 202, PLAINFIELD NJ 07060	10-08-01
LEON FRAZER, PARTNER	646 HAROLD PL., PISCATAWAY, NJ 08854	10-08-01
IVAN RAY, PARTNER	670 WEST 8 TH ST., PLAINFIELD, NJ 07060	10-08-01
GM TRUCKING ASSOCIATES, INC	833 RANOCAS RD., MT. HOLLY, NJ 08060	06-29-01
GARY MUSGRAVE, PRESIDENT	PO BOX 674, JANELEW, W. VIRGINIA 26378	06-29-01
GARCON, INC.	CUSHETUNK COURT WEST, SUITE 1B, PO BOX 495, WHITEHOUSE, NJ 08888	07-19-02
LARRY GARAFALO, OWNER	262 PENNSWAY, BASKING RIDGE, NJ 07920	07-19-02
GASTONAL ELECTRICAL CONTRACTORS, INC.	611 SAXONY DR., FAIRLESS HILLS, PA 19030	11-15-03
GASTONAL B. KAIKPO, PRESIDENT	611 SAXONY DR., FAIRLESS HILLS, PA 19030	11-15-03
GRILLO CONSTRUCTION CO.	300 CHELSEA AVE., LONG BRANCH, NJ 07740	09-20-02
JOHN GRILLO, OWNER	300 CHELSEA AVE., APT. 2, LONG BRANCH NJ 07740	09-20-02
HAMILTON CONSTRUCTION, INC.	3 FERN CT., HAMILTON TWP., NJ 08690	09-20-02
TED HAMILTON, PRESIDENT	3 FERN CT., HAMILTON TWP., NJ 08690	09-20-02
HAUSER CONTRACTING CO.	60 OLD CAMPLAIN RD., HILLSBORO, NJ 08876	01-14-02
ALFRED M. HAUSER, PRESIDENT	60 OLD CAMPLAIN RD., HILLSBORO, NJ 08876	01-14-02
HI-AMP ELECTRIC, INC.	265-12 HILLSIDE AVE., FLORAL PARK, NY 11004	05-02-03
IVAN TORRES, PRESIDENT	285 VANDERBILT PKWY., DIX HILLS, NY 10746	05-02-03

ISLAND CONSTRUCTION	480 VAN NAME AVE., STATEN ISLAND, 10303	08-10-02
GLEN GREY, OWNER	480 VAN NAME AVE., STATEN ISLAND 10303	08-10-02
JDK CONSTRUCTION & MANAGEMENT CO.	1 WIGWAM PL., HOLMDEL, NJ 07733	02-25-02
JOSEPH A. KOHLER, OWNER/PRES.	1 WIGWAM PL., HOLMDEL, NJ 07733	02-25-02
JG NASILE PAINTING CO.	2114 SPRUCE ST., TRENTON, NJ 08638	08-25-01
GERALD J. NASILE, PRESIDENT	315 LAMBERTVILLE-HOPEWELL RD., LAMBERTVILLE, NJ 08530	08-25-01
J.J. SCILLIERI & ASSOCIATES, INC.	325 CANTOR AVE., LINDEN, NJ 07036	10-24-03
JOSEPH J. SCILLIERI, PRESIDENT	23 BROOKVIEW CIRCLE, JAMESBURG, NJ 08831	10-24-03
BARBARA CORBETT, SEC./TREASURER	325 CANTOR AVE., LINDEN, NJ 07036	10-24-03
J. L. MONROE CONSTRUCTION	71 MONROE ST., NEWARK, NJ 07105	08-10-02
GEORGE SANTOS, PRESIDENT	71 MONROE ST., NEWARK, NJ 07105	08-10-02
LOUIS SANTOS, VICE PRESIDENT	71 MONROE ST., NEWARK, NJ 07105	08-10-02
J R LAND, INC	PO BOX 442, THREE BRIDGES, NJ 08887	01-12-02
JIM REED, PRESIDENT	741 BUCCANEER LN. MANAHAWKIN, NJ 08050	01-12-02
JAMES M. MACHINGA, OWNER	3 AVONDALE LN., ABERDEEN, NJ 07747	09-13-02
D/B/A JAMES M. MACHINGA		
JAMES LUSKER FIRE PROTECTION CORP.	1052 BELL CT., TOMS RIVER, NJ 08753	11-25-01
JAMES LUSKER, PRES.	1052 BELL CT., TOMS RIVER, NJ 08753	11-25-01
JEFF SCRAP & RECYCLING	35 LAKESIDE AVE., LAKE STOCKHOLM NJ 07460	07-29-02
JEFF BECK, OWNER	35 LAKESIDE AVE., LAKE STOCKHOLM NJ 07460	07-29-02
JEMCO, Inc.	85 TRACEY STATION RD., MANALAPAN, NJ 07726	11-01-03
a/k/a JEMCO FABRICATING, INC.	85 TRACEY STATION RD., MANALAPAN, NJ 07726	11-01-03
JOSEPH ZAWADA, PRESIDENT		
JERSEY SHORE CONSTRUCTION, INC	2127 EISENHOWER RD., TOMS RIVER NJ 08753	06-07-03
DOMENICA IEMMA, PRESIDENT	2127 EISENHOWER RD., TOMS RIVER NJ 08753	06-07-03
K & L LIMITED LIABILITY CO.	47 MORREL ST., LONG BRANCH, NJ 07740	10-24-03
a/k/a K & L MASON, LLC		
JORGE LIGERIO, OWNER/PRESIDENT	47 MORREL ST., LONG BRANCH, NJ 07740	10-24-03
KMK CONSTRUCTION GROUP, INC.	225 GORDONS CORNER RD., SUITE 2D, MANALAPAN, NJ 07726	01-15-02
KP CARPENTRY	608 OHIO AVE., TRENTON, NJ 08638	03-09-02
KRZYSZTOF PUSTELNIK, OWNER	608 OHIO AVE., TRENTON, NJ 08638	03-09-02
KAIREN, INC.	54 HAAS RD., BASKING RIDGE, NJ 07920	09-01-01
MATTHEW M. KAIREN, PRESIDENT	54 HAAS RD., BASKING RIDGE, NJ 07920	09-01-01

KENNETH EBLING PLUMBING	165 GAINSBORO RD., LAWRENCEVILLE, NJ 08648	01-14-02
KENNETH EBLING, OWNER	165 GAINSBORO RD., LAWRENCEVILLE NJ 08648	01-14-02
LMJ CONSTRUCTION, INC.	468 NORTH 13 TH ST., NEWARK, NJ 07107	06-24-02
JAOQUIM DASILVA, OWNER	468 NORTH 13 TH ST., NEWARK, NJ 07107	06-24-02
LAND ASSOCIATES, INC.	53 BARBOUR ST., HALEDON, NJ 07508	10-23-01
MARTIN VANBOERUM, PRES.	53 BARBOUR ST., HALEDON, NJ 07508	10-23-01
LEIRIA CONSTRUCTION	614 S. BROAD ST., ELIZABETH, NJ 07457	08-02-02
FRANK SANTOS, OWNER	614 S. BROAD ST., ELIZABETH, NJ 07457	08-02-02
LILA DRYWALL, INC.	153 HOWELL AVE., FORDS, NJ 08863	01-05-03
	9 DAHLIA RD., SOMERSET, NJ 08873	01-05-03
STEPHEN HINITIS, PRESIDENT	153 HOWELL AVE., FORDS, NJ 08863	01-05-03
	9 DAHLIA RD., SOMERSET, NJ 08873	01-05-03
MBC CONSTRUCTION CO.	15 MEDFORD PL., WAYNE, NJ 07470	10-23-01
JACK MEYER, PRESIDENT	15 MEDFORD PL., WAYNE, NJ 07470	10-23-01
MCS CONTRACTING, LLC	33 WREN LN., NESHANIC STATION, NJ 08853	01-13-03
MARK M. RUDDEN, PRESIDENT	33 WREN LN., NESHANIC STATION, NJ 08853	01-13-03
MED CONSTRUCTION CO., INC.	2200 ROUTE 88, BRICK, NJ 08723	01-07-03
	PO BOX 242, BRICK, NJ 08723	01-07-03
EDMUND E. DURRUA, III, PRES.	2200 ROUTE 88, BRICK, NJ 08723	01-07-03
	PO BOX 242, BRICK, NJ 08723	01-07-03
MARY DURRUA, VICE PRESIDENT	2200 ROUTE 88, BRICK, NJ 08723	01-07-03
	PO BOX 242, BRICK, NJ 08723	01-07-03
M&M FLOORING	1275 BLOOMFIELD AVE., BLDG. 3, DOOR 51, FAIRFIELD, NJ 07004	04-07-02
MICHAEL R. ABBOTT, OWNER	56 HARRISON AVE., WEST ORANGE, NJ 07052	04-07-02
MP SUBCONTRACTORS CO.	209 SENECA TR., BROWNS MILLS, NJ 08015	10-24-03
MARK PITTMAN, OWNER	209 SENECA TR., BROWNS MILLS, NJ 08015	10-24-03
MECHANICAL MAINTENANCE CORP.	1 MILL ST., BERNARDSVILLE, NJ 07924	06-07-03
T/A FOSTER MECHANICAL CO.		
MARVIN FOSTER, PRESIDENT	749 SCOTLAND RD., ORANGE, NJ 07050	06-07-03
NICHOLAS NOVELLO, SR., VICE PRES./SEC.	16 N. RYLAND RD., WHITEHOUSE, NJ 08889	06-07-03
MILOR SERVICES, INC.	3433 SUNSET AVE., OCEAN, NJ 07712	02-25-02
MARTIN INDURSKY, PRESIDENT	3433 SUNSET AVE., OCEAN, NJ 07712	02-25-02
MIREK ZAWODZINSKI	1437 FANSHOW ST., PHILADELPHIA, PA. 19111	01-22-02
NTE CORPORATION	395 LARKIN PL., PO Box 640, OAKHURST NJ 07755	07-06-01
NICKOLAS KOUKOUKIS, PRES.	112 FORTUNATO PL., NEPTUNE, NJ 07753	07-06-01
NO. 1 QUALITY PAINTING CO.	505-A 9 TH ST., NEWARK, NJ 07107	11-18-02
	187 N. 18 TH ST., BLOOMFIELD, NJ 07003	
VASOS TOUMAZOU, OWNER	505-A 9 TH ST., NEWARK, NJ 07107	11-18-02
	187 N. 18 TH ST., BLOOMFIELD, NJ 07003	

NOBLE ERECTION CO.	500 WOODHAVEN RD., SOUTHAMPTON, PA 18966	05-25-02
PAUL NOBLE, OWNER	117 PIPER PL., CHALFONTE, PA. 18914	05-25-02
NORTHEAST CONSTRUCTION MGMT. INC.	8 RIDGEWOOD RD., FRANKLIN, NJ 07416	11-02-01
PATRICK BARTON, PRESIDENT	8 RIDGEWOOD RD., FRANKLIN, NJ 07416	11-02-01
OAK BUILDERS, INC.	225 BOSTON AVE., 1 ST FL., HILLSIDE, NJ 07205	11-01-03
JOAO M. CARVALHO, PRESIDENT	225 BOSTON AVE., 1 ST FL., HILLSIDE NJ 07205	11-01-03
P & R CONSTRUCTION, INC.	1970 SWARTHMORE AVE, #8, LAKEWOOD, NJ 08701	11-19-02
PHILLIP PORTNOY, PRESIDENT	605 14 TH ST., LAKEWOOD, NJ 08701	11-19-02
RALPH PORTNOY, SECRETARY	1970 SWARTHMORE AVE., #8, LAKEWOOD NJ 08701	11-19-02
PASO LARGO CONSTRUCTION, INC.	790 FARMINGDALE RD., JACKSON, NJ 08527	05-16-03
STEPHANIE VOGEL, PRESIDENT	31 SUNNYSIDE RD., HOWELL, NJ 07731	05-16-03
K. VOGEL, VICE PRESIDENT	790 FARMINGDALE RD., JACKSON, NJ 08527	05-16-03
KAREN VOGEL, SECRETARY	790 FARMINGDALE RD., JACKSON, NJ 08527	05-16-03
PAY DIRT, INC.	1614 N. MARCONI RD., WALL, NJ 07719	02-01-03
THOMAS PARKER, PRESIDENT	1614 N. MARCONI RD., WALL, NJ 07719	02-01-03
PEPE PLUMBING, INC.	171 BOULEVARD, HASBROUCK HGHTS., NJ 07604	02-07-03
GARRETT R. PEPE, PRESIDENT	187 BURTON ST., HASBROUCK HGHTS., NJ 07604	02-07-03
SUZETTE PEPE, VICE PRES./TREAS.	148 LASALLE AVE., HASBROUCK HGHTS., NJ 07604	02-07-03
PETERS HOME IMPROVEMENT	551 FOX CHASE RD., HOLLYWOOD, PA. 19046	01-20-02
PETRILLI ELECTRIC CO., INC.	5 COUNTRY LN., PO BOX 657, HOLMDEL, NJ 07733	11-08-03
FRANK PETRILLI, PRESIDENT	5 COUNTRY LN., HOLMDEL, NJ 07733	11-08-03
DEBORAH PETRILLI, SEC'Y/TREASURER	5 COUNTRY LN., HOLMDEL, NJ 07733	11-08-03
PHIL NETO CONSTRUCTION CO., INC.	359 NEW RD., PARSIPPANY, NJ 07053	06-02-02
PHIL NETO, PRESIDENT	18 PERRY ST., E. HANOVER, NJ 07936	06-02-02
RP CONSTRUCTION & PAINTING CO.	7 ST. MARKS PL., KEANSBURG, NJ 07734	06-07-03
MICHAEL TENEBRUSO, OWNER	7 ST. MARKS PL., KEANSBURG, NJ 07734	06-07-03
RANCO MASONRY CONTRACTORS	203 SUMMIT RD., ELIZABETH, NJ 07208	09-03-01
JOSEPH RANDAZZA, SR., VP	203 SUMMIT RD., ELIZABETH, NJ 07208	09-03-01
RICHARDS INSTALLATIONS CO.	620 E. LAKEFRONT CIRCLE, SMITHVILLE, NJ 08201	04-10-03
RICHARD PREUSTER, PRESIDENT	620 E. LAKEFRONT CIRCLE, SMITHVILLE NJ 08201	04-10-03
RIVERO PLUMBING & HEATING, INC.	529 E. JERSEY ST., ELIZABETH, NJ 07208	01-05-03
NICHOLAS RIVERO, PRESIDENT	736 LIVINGSTON RD., ELIZABETH, NJ 07208	01-05-03
	529 E. JERSEY ST., ELIZABETH, NJ 07208	01-05-03
	736 LIVINGSTON RD., ELIZABETH, NJ 07208	01-05-03

ROBERT LEEDS JR., COMPANY ROBERT LEEDS JR., OWNER	616 WINSLOW RD., WILLIAMSTOWN, NJ 08094 616 WINSLOW RD., WILLIAMSTOWN, NJ 08094	10-24-03 10-24-03
ROIVOS CONSTRUCTION CO. CASINORO VIANNA, OWNER ERRUNE VALLERO, OWNER	1366 FREMONT PL., ELIZABETH, NJ 07207 1366 FREMONT PL., ELIZABETH, NJ 07207 24 FLOORAL AVE., ELIZABETH, NJ 07207	07-29-02 07-29-02 07-29-02
ROMAN, INC.	407 COMMERCE LANE, PO BOX 467, WEST BERLIN, NJ 08009	05-12-02
ROOF PROS CO.	214 OLD CLOVE RD., WANTAGE, NJ 07461 PO BOX 715, McAFEE, NJ 07428 6 HILLSIDE TERRACE, SUSSEX, NJ 07461	01-07-03 01-07-03 01-07-03
SEAN MITCHELL, PARTNER	214 OLD CLOVE RD., WANTAGE, NJ 07461 PO BOX 715, McAFEE, NJ 07428 6 HILLSIDE TERRACE, SUSSEX, NJ 07461	01-07-03 01-07-03 01-07-03
CHRIS NAGY, PARTNER	214 OLD CLOVE RD., WANTAGE, NJ 07461	01-07-03
RUSS FETTY DBA RUSS FETTY	PRINCE ST., PO BOX 471, CHATSWORTH NJ 08019	06-24-02
S&M ELECTRICAL CONTRACTORS, INC. EVEROY MORRISON, PRESIDENT DONAVAN MORRISON, V.P.	PO BOX 6446, NEWARK, NJ 07106 246 COLUMBIA AVE., IRVINGTON, NJ 07111 248 COLUMBIA AVE., IRVINGTON, NJ 07111	01-20-02 01-20-02 01-20-02
SANSLA, INC. JADRANKA VASILIC, PRES. NOWAK VASILIC, V.P.	41 LIBERTY ST., PASSAIC, NJ 07055 54 KATZ AVE., PATERSON, NJ 07522 54 KATZ AVE., PATERSON, NJ 07522	09-20-02 09-20-02 09-20-02
SOUTHERN INDUSTRIAL SAND, INC. HERBERT ELLSWORTH, PRES.	MONROE INDUSTRIAL PARK, WILLIAMSTOWN NJ 08094 PO BOX 220, WILLIAMSTOWN, NJ 08094	09-14-01 09-14-01
SPEAKMAN ROOFING ROBERT SPEAKMAN, OWNER	1508 DILWORTH, WILMINGTON, DE. 19805 1508 DILWORTH, WILMINGTON, DE. 19805	08-02-02 08-02-02
SUN-UP CONSTRUCTION JOHN MELILLO, PRESIDENT JOHN DIBIASI, VICE PRESIDENT	1300 RACHEL TERR., 23, PINE BROOK, NJ 07058 165 RYAN ST., S. PLAINFIELD, NJ 07080 165 RYAN ST., S. PLAINFIELD, NJ 07080	12-07-01 12-07-01 12-07-01
TERRY CONSTRUCTION, INC. TERRY HENDRICKS, PRESIDENT	24 CLAUDE AVE., DENVILLE, NJ 07834 24 CLAUDE AVE., DENVILLE, NJ 07834	06-24-02 06-24-02
THELTA CONSTRUCTION MARINO ELLIS, OWNER	558 79 TH ST., BROOKLYN, NY 11209 558 79 TH ST., BROOKLYN, NY 11209	11-17-02 11-17-02
THERMAL SOLUTIONS CO. VICTOR WILLIAMS, OWNER	254 FRANK APPELEGATE RD., JACKSON NJ 08527 254 FRANK APPELEGATE RD., JACKSON NJ 08527	04-23-02 04-23-02
THOMAS CAUL CARPENTRY CO. THOMAS CAUL, OWNER	1403 MONMOUTH RD., MT. HOLLY, NJ 08060 1403 MONMOUTH RD., MT. HOLLY, NJ 08060	10-24-03 10-24-03

THOMAS PROCTOR CO.	218 N. 5 TH ST., LONG BRANCH, NJ 07740	05-02-03
THOMAS P. KIELY, PRESIDENT	218 N. 5 TH ST., LONG BRANCH, NJ 07740	05-02-03
CRAIG KIELY, SECRETARY	420 RUMSON RD., LITTLE SILVER, NJ 07739	05-02-03
THOMAS & SON BUILDING CONTRACTOR	1 LOCUST ST., LAKEHURST, NJ 08733	12-22-01
JAMES H. THOMAS, PRESIDENT	1 LOCUST ST., LAKEHURST, NJ 08733	12-22-01
U. S. CONTRACTORS CORP.	501 CALHOUN ST., TRENTON, NJ 08618	10-09-01
CHRIS PIECH, PRESIDENT	104 LAKEDALE DR., LAWRENCEVILLE, NJ 08648	10-09-01
V. TUFARO & SONS, INC.	PO BOX 360, S. PLAINFIELD, NJ 07080	10-22-01
VINCENT TUFARO, JR. V.P.	163 COPPERTREE RD., EDISON, NJ 08820	10-22-01
NICHOLAS TUFARO, V.P.	86 ALDERBERRY CT., EDISON, NJ 08820	10-22-01
VITAL CONSTRUCTION	1878A, 31 NORTH, CLINTON, NJ 08809	08-18-02
DONALD HUBER, PRES.	1311 E. BOULEVARD, ALPHA, NJ 08865	08-18-02
WADE'S TOTAL COMMERCIAL CO.	24 AINSWORTH LN, SICKLERVILLE 08081	01-05-03
JOHNNIE WADE, OWNER	24 AINSWORTH LN, SICKLERVILLE 08081	01-05-03
WALLE ACRES NURSERIES	97 COOKSTOWN-NEW EGYPT RD., WRIGHTSTOWN NJ 08562	06-21-02
CLEMENTE WALLE, OWNER	97 COOKSTOWN-NEW EGYPT RD., WRIGHTSTOWN NJ 08562	06-21-02
WELLEN OIL & CHEMICAL, INC.	PO BOX 6668, JERSEY CITY, NJ 07306	03-05-02
MORRIS WELLEN, PRESIDENT	81 GIFFORD AVE., JERSEY CITY, NJ 07306	03-05-02
FLORENCE WELLEN, SECRETARY	81 GIFFORD AVE., JERSEY CITY, NJ 07306	03-05-02
WHITE BUFFALO CONCRETE	8 W. MAIN ST., 2 ND FLOOR, FARMINGDALE NJ 07727	10-07-01
VALARIE WRIGHT	390 FAIRFIELD RD., FREEHOLD, NJ 07728	10-07-01
WILK GENERAL CONTRACTING	20 PASSAIC ST., GARFIELD, NJ 07028	03-22-02
JAMES WILK, OWNER	9-15 3 RD ST., FAIRLAWN, NJ 07401	03-22-02
WILLIAM FRENCH CO.	93 TRINITY PLACE, AVENEL, NJ 07001	02-01-03
WILLIAM FRENCH, OWNER	93 TRINITY PLACE, AVENEL, NJ 07001	02-01-03
ZAWADA BROTHERS CO.	1400 LAUREL RD., POTTSVILLE, PA 17901	02-07-03
ANTHONY ZAWADA, PARTNER	116 POTTSVILLE ST., PORT CARBON, PA 17965	02-07-03
MICHAEL ZAWADA, PARTNER	400 NORTH 18 TH ST., POTTSVILLE, PA 17901	02-07-03

DEBARRED PENDING OAL HEARING

TECHNICAL SPECIFICATIONS

FOR

PROPOSED SITE LIGHTING

VARIOUS LOCATIONS

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1. General Work
2. Decorative Lighting
3. Sports Lighting
4. Electrical Work
5. Concrete Work
6. Restoration

TECHNICAL SECTION 1.
GENERAL WORK

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **GENERAL WORK** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEM applicable to this Section is:

GENERAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (1A)
GENERAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (1B)
GENERAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (1C)
GENERAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (1D)

Additional Information. Additional information for all or part of the Work included under this Section is as follows:

(1) General Work shall include the cost of initiating the Contract, and such portions of the following that are required for the Project: setting up the CONTRACTOR's general plant, offices, shops, storage areas, sanitary and other facilities as required; providing access to the project site; obtaining necessary permits and licenses, and payment of fees; protecting existing utilities; lighting work areas; providing working drawings; construction stakeout and surveying; providing required insurance and bonds; and restoration of all areas disturbed during the course of construction activity.

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

GENERAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (1A)
GENERAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (1B)
GENERAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (1C)
GENERAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (1D)

(1) The work under this Section shall include all preparatory work and operations, necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, and other work performed or costs incurred prior to beginning work.

(2) Materials shall include snow fence, lights or other means necessary to designate the limits of the project and prevent entry by the public to the site of the work.

(3) The CONTRACTOR shall provide all work required in connection with the layout for construction of the Project, using the control points and data furnished by the ENGINEER.

The CONTRACTOR shall furnish all necessary qualified personnel and adequate equipment to preserve such controls throughout the duration of the Contract, and shall lay out therefrom all of the lines and grades necessary for the complete construction of the Project.

(4) All necessary regulatory and warning signs, devices, barricades, traffic guides, lights, flares, and other devices necessary shall be in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highways*.

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Required Execution.

GENERAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (1A)

GENERAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (1B)

GENERAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (1C)

GENERAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (1D)

(1) CONTRACTOR shall provide barricades to protect the public from injury from the CONTRACTOR'S work. Barricades shall be placed so as to prevent unauthorized persons from entering the work area. Barricades shall consist of snow fence, lights or other means necessary to prevent entry to the work area.

(2) CONTRACTOR shall also remove and dispose of all construction debris. All debris shall be cleaned up on a daily basis and placed in containers or trucks. The materials shall be removed from the site of work and disposed of by the CONTRACTOR at an approved disposal site at no additional cost to the OWNER.

(3) This item shall include all restoration to the site, including repair of any and all existing items damaged during CONTRACTOR'S work. All restoration shall match the material, texture and finish of original conditions.

(4) All Traffic Control devices for all work along roadways or in existing parking lots shall be placed and maintained in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highways*, latest edition.

(5) The CONTRACTOR shall notify the Owner of any affected properties at least 24 hours prior to the time he proposes to begin any work which will interfere with their normal passage.

(6) Watchmen and flagmen shall be employed by the CONTRACTOR for the protection of any equipment entering, leaving or crossing the active traffic lanes, or as may be required for the routing of any traffic around or through construction on the existing roadway. Watchmen and flagmen will be employed by the CONTRACTOR at no additional cost to the OWNER.

(7) Prior to any excavation, the CONTRACTOR shall have all utilities marked and shall excavate, test pit, or otherwise determine the exact location and elevations of said utilities. The CONTRACTOR shall notify the ENGINEER of any conflicts. The CONTRACTOR shall arrange for any necessary utility relocations or plan changes and shall reschedule his operations appropriately.

(8) The CONTRACTOR, in the construction of any project, shall not stockpile materials or operate his equipment on any private property; except in areas designated on the plans or as directed by the ENGINEER. Areas for stockpiling and staging shall be approved by the ENGINEER prior to the commencement of construction.

(9) The CONTRACTOR shall take care and caution to preserve and protect all existing pavements, curbs, grass areas, sidewalk, private and public property along and adjacent to the lines of work. Any destruction to any of the above, beyond the limits of work, or caused by careless construction procedures shall be replaced by the CONTRACTOR at no additional cost to the OWNER.

(10) Unless otherwise directed, all excess material shall be removed from the site and disposed of by the CONTRACTOR.

(11) Watchmen and flagmen shall be employed by the CONTRACTOR for the protection of any equipment entering, leaving or crossing the active traffic lanes. Watchmen and flagmen will be employed by the CONTRACTOR at no additional cost to the OWNER.

(12) Before beginning the work on any stage of the project, the CONTRACTOR shall furnish and install all traffic maintenance devices, including warning signs, barricades, traffic guides, lights, flares, cones and other devices necessary in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highway*, and *Standard Highway Signs*.

(13) The CONTRACTOR shall provide all necessary survey layout work as required for construction of the facilities.

D. TESTS AND INSPECTIONS

Not Applicable this Section.

E. SUBMITTALS

Not Applicable this Section.

F. PAYMENT

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for General Work – Windward Beach Entrance Area Lighting (1A), General Work – Windward Beach Sidewalk Lighting (1B), General Work – Drum Point Recreation Complex Lighting (1C) and General Work – Veterans Memorial Middle School Lighting (1D) will be made at the Lump Sum price bid for these items in the Schedule of Prices in the Bid Form, which price shall include barricades and other devices for site protection; providing all survey and layout work; maintaining public safety; traffic control; restoration of existing improvements; daily removal and disposal of construction debris; utility locations; stockpiling/staging areas; mobilization; and all other work and materials described hereinabove.

TECHNICAL SECTION 2.

DECORATIVE LIGHTING

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **DECORATIVE LIGHTING** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEM applicable to this Section is:

WINDWARD BEACH – ENTRANCE AREA LIGHTING (2A)
WINDWARD BEACH – SIDEWALK LIGHTING (2B)

Additional Information.

(1) Payment for Windward Beach – Entrance Area Lighting (2A) shall include, but not be limited to, all labor, equipment and materials required for furnishing and installing one (1) light pole and base in the curbed island located at the entrance into Windward Beach. The Contractor shall minimize damage to the existing entrance sign and landscaping on the curb island.

(2) Payment for Windward Beach – Sidewalk Lighting (2B) shall include, but not be limited to, all labor, equipment and materials required for furnishing and installing thirteen (13) decorative light poles and bases behind the existing fence and as indicated on the construction drawings. The Contractor shall minimize damage to the existing trees, root system and fencing. The Contractor shall prune lower branches of the existing pine trees as required to obtain the designed lighting intensities in the sidewalk area.

Laws and Regulation. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work included under this Section attention is directed to the specific requirements of:

- (1) National Electrical Code
- (2) N.J. State Electrical Subcode
- (3) Local and Municipal Codes

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

WINDWARD BEACH – ENTRANCE AREA LIGHTING (2A)

(1) The luminaries and poles shall be manufactured by Gardco Outdoor Lighting, the local sales office being at 96 Freneau Avenue, Matawan New Jersey 07747, TEL 732-566-5100, FAX 732-566-5515., or approved equal.

Entrance area lighting shall be:

- Gardco Gullwing G18-2-3X-1000MH-SS14.5-25H

(2) The G18 luminaire shall be a low profile form, having a one-piece die cast aluminum housing that attaches directly to the pole without the need of a support arm.

(3) The power switch for the entrance area lights shall be located on the pole in a locking enclosure. Three (3) sets of keys to the enclosure shall be supplied to the OWNER.

(4) The lens assembly shall be a single-piece die cast aluminum lens frame, hinged to the housing and secured by a stainless steel lanyard and hinge pin.

(5) The lens shall be clear tempered sagged glass, secured using eight retainers to the lens frame.

(6) The electrical and optical chambers shall be sealed by a one-piece memory retentive hollow core EPDM gasket.

(7) The Effective Projected Area (EPA) of twin luminaires oriented 180 degrees apart shall be not more than 2.4 square feet.

(8) Substitutes in shape or form are not permitted.

Optical Systems

(1) The basis of the optical system shall be segmented, faceted homogenous sheet aluminum, which is electrochemically brightened, anodized and sealed. This multifaceted arc image duplicating system shall produce the IES type III pattern. The facets shall form a conical fan around the lamp's arc tube and each facet shall be positioned precisely tangent to the top of the arc tube.

Color

(1) The finish color of luminaires shall be Textured Semi-gloss Black. Poles and accessories shall be smooth semi-gloss Black.

Finish

- (1) Luminaires shall be bathed, cleaned, and treated with chromate acid (patented).
- (2) Luminaires are finished with electrostatically applied, thermally cured textured TGIC.

Maintenance

- (1) The luminaire shall be maintained without tools. Access to the luminaire body shall be from a tool-less entry latch. The ballast module and reflector pan have tool less removal. The segmented reflector shall be capable of rotation in 90 degree increments. All electrical connections shall be Molex disconnect plugs.

Hardware

- (1) All hardware shall be stainless steel

Light Source

- (1) The light source shall be ANSI type M47 1000W clear type MH1000/U, universal operating position,

Safety

- (1) The luminaire shall be Underwriters Laboratory (UL) listed for Wet Location

Labels

- (1) The luminaires shall bear UL, and either CSA or CUL Wet Location and I.B.E.W. labels.

Ballast

- (1) The ballast and all related components shall be mounted on a removable unitized ballast tray for ease of maintenance. The ballast trays shall be removable without tools. The electrical supply connectors to the ballast tray shall be Molex quick-disconnect terminals for ease of maintenance.
- (2) The ballast installed in these luminaires shall be rated for reliable starting down to -20°F, possess a power factor of a minimum of 90%, be UL recognized, provide regulation of lamp power within ±10% supply voltage change, and shall be a Constant-Wattage autotransformer (CWA) design. The ballast input leads shall be multi-tapped 120/208/240/277V 60Hz and the ballasts shall be capable of operating M47 and H36 lamps.

Pole

- (1) The pole shall be 4 inch square shape, 20 feet in length. The wall thickness shall be 11 gauge. The rated wind loading of the poles at 100 MPH shall be not less than 5.3 square feet.

- (2) The bolt circle shall be 8 inches. The anchor bolt size shall be ¾ inch by 18 inch by 3 inch.
- (3) The Pole Shaft shall be a single piece of 7-gauge (0.1793") commercial carbon steel. The formed steel plate shall be longitudinally welded and will provide a maximum yield strength of 46 KSI
- (4) Each pole shall have a removable top cap.
- (5) The handhole shall be reinforced. A handhold cover and attachment screws shall be provided. A nut holder shall be attached to the handhole and shall include a ½"-13 UNC hex head bolt and nut for grounding. The base cover shall cover the entire base plate and anchorage.
- (6) The anchor base shall be fabricated from structural quality hot carbon steel plate with minimum yield strength of 36 KSI. The base plate shall telescope the pole shaft and be circumferentially welded on both top and bottom.

Pole Mounting

- (1) The anchor bolts shall be fabricated from commercial quality hot rolled carbon steel bar with a minimum guaranteed yield strength of 50 KSI. The bolts shall have an "L" bend at one end and threaded on the opposite end with a minimum thread length of 4½ inches. Anchor bolts are completely hot dipped galvanized a minimum length of 12 inches on the threaded end. Four anchor bolts, each with two hex nuts, two flat washers and two lock washers shall be provided.

Pole Base

- (1) Light pole base shall be constructed as shown on the construction details.

WINDWARD BEACH – SIDEWALK LIGHTING (2B)

- (1) The luminaires and poles shall be manufactured by Lumec Inc., the local sales office being at 96 Freneau Avenue, Matawan New Jersey 07747, TEL 732-566-5100, FAX 732-566-5515., or approved equal.
- (2) Sidewalk lighting shall be:
 - LP20-100MH-RR3-SF1-APR4W-12-BKTX

Product Description:

Luminaire LP20

- (1) The luminaire shall consist of a one-piece square tapered cast-aluminum housing, with four fully-gasketed polycarbonate lenses. The cast-aluminum hood and decorative finial are attached to the housing using two built-in hinges.

The luminaire body shall be mechanically attached to the cast-aluminum pole adaptor.

Poles

(1) The poles shall be 12 feet in height. They shall be made from one-piece, 4 inch round tube of extruded aluminum welded at both the top and bottom of a reinforced base of zinc-rich cast aluminum. There shall be one 2 inch by 4 ½ inch maintenance opening per pole. The cover and copper ground lug shall be centered 20 inches from the bottom of the anchor plate.

(2) Pole wall thickness shall be not less than 0.318 inches. The wind rating (EPA) at 100MPH +30% gust factor shall not be less than 7.0 square feet. The wind rating shall be calculated using AASHTO procedures.

Base cover

(1) The base cover shall be made of two pieces of formed aluminum, mechanically fastened to the base with stainless steel screws.

Pole Mounting

(1) The bolt circle shall be 6 ¾ inches. The anchor bolts shall be above-grade galvanized steel ¾ X 17 X 3 inches. Steel bolt pattern template shall be provided.

Optical System

(1) The optical system shall consist of a sealed optical chamber made of a hydroformed reflector permanently sealed onto an injection-molded polycarbonate refractor, with internal prisms. The optical system shall be a sealed, dust-tight, chamber that protects the optical system. The socket assembly shall be vertically adjustable, without the use of tools, to five positions. The socket position, set at the factory, shall be position 1. The optical system Ingress Protection shall be rated not less than IP66. The IES Roadway Lighting Classification shall be Type III semi-cutoff.

Color

(1) The finish color of luminaires, poles and accessories shall be Textured Black (BKTX). A chemical shrinking agent shall produce the textured finish. Textured finish produced using particulate adders is not permitted.

Finish

(1) Aluminum Materials

The following procedures shall be employed:

- A. The pretreatment process shall include the following complete immersion steps:
 1. Alkaline cleaner, inside and outside
 2. Clear water rinse
 3. Reactive organic conversion coating, inside and outside
 4. Final rinse, clear water

- B. An electrostatically applied, heat cured, polyester powder coat finish shall be applied to all exposed metallic parts, both inside and outside.
- C. All pretreatment steps and final finish coat application shall be performed at the same location as the final assembly process.
- D. An electrostatically applied, heat cured, polyester powder coat finish shall be applied to all exposed metallic parts, both inside and outside the poles. The coating shall be a minimum of 100 microns thick. The paint finish shall meet ASTM-B117 requirements (salt spray) and ASTM-D2247 requirements (humidity resistance).

Maintenance

- (1) There shall be tool-free access to the lamp via a sleeve and shutter, and to the ballast tray that slides inside a ballast box.
- (2) The tool-free lamp access, with self-adjusting injection-molded silicone gasket, shall keep the optical chamber sealed.

Hardware

- (1) Hardware shall be of stainless steel.

Light Source

- (1) Metal Halide Clear 100 watt universal burning position (M90) lamps shall be used.

Ballast

- (1) The ballast and all related components shall be mounted on a removable unitized ballast tray for ease of maintenance. The ballast trays shall be removable without tools. The electrical supply connectors to the ballast tray shall be Molex quick-disconnect terminals for ease of maintenance.
- (2) The ballast installed in these luminaires shall be rated for reliable starting down to -30°F, possess a power factor of a minimum of 90%, be UL and CSA recognized, provide regulation of lamp power within ±10% supply voltage change, and shall be a Constant-Wattage autotransformer (CWA) design. The ballast input leads shall be 120V 60Hz and the ballasts shall be capable of operating M90 lamps.

Safety

- (1) The luminaires shall be Underwriters Laboratory (UL) listed.

Photometrics

(1) The photometric performance of the luminaires, which has the street-side optics directed at 000 degrees, with a 14.9 foot optical center height, using 100 watt metal halide lamps rated at 8500 initial lumens and a LLF of 0.72 shall, at ground level:

(2) At an angle of 000 degrees at a 40.8 foot distance be not less than 0.1 horizontal footcandles.

(3) At angles of 033 and 213 degrees and 37.1 foot distance be not less than 0.1 horizontal footcandles.

(4) At angles of 062 and 242 degrees at a 43.0 foot distance be not less than 0.1 horizontal footcandles

(5) At an angle of 180 degrees at a 35.0 foot distance be not less than 0.1 horizontal footcandles

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Required Execution.

WINDWARD BEACH – ENTRANCE AREA LIGHTING (2A)

WINDWARD BEACH – SIDEWALK LIGHTING (2B)

(1) All lighting shall be installed in accordance with manufacturer's specifications and all applicable lighting and electrical codes.

(2) Light pole base shall be constructed as shown on the construction details.

(3) CONTRACTOR shall do all excavation of earth that may be required for the installation of the work. Perform all necessary backfilling, rough grading, removal of surplus earth or other materials. Remove all water that may accumulate in any excavation necessary for this work.

(4) CONTRACTOR to coordinate and schedule his work so that all equipment is installed at the same time to avoid prolonged periods of open excavation.

(5) Install site lighting units and products as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC, NESC and NEMA standards and with recognized industry practices to ensure that the item installations fulfills requirements.

(6) Utilize belt slings or rope (not chain or cable) to protect finishes when raising and setting finished standards.

(7) Set standards plumb in concrete foundations.

(8) Fasten electrical lighting fixtures and cross arms to indicated structural supports; and ensure that installed fixtures are plumb and level.

(9) Tighten connectors and terminals, including screws and bolts, in accordance with tightening torques specified in UL Standards 486A and B and the National Electric Code.

D. TEST AND INSPECTIONS

Contract Requirements. Tests and inspections for the acceptance of materials and equipment, or work, shall be conducted in accordance with the Contract Documents, with attention to Paragraph 13.03 of the General Conditions.

Required Tests and Inspections.

(1) The CONTRACTOR shall arrange for inspection by all agencies having jurisdiction over work and shall pay the cost of all inspections and re-inspections.

(2) Before an application for final acceptance of the work will be considered, all tests deemed necessary to shown proper execution of the work shall have been performed and completed in the presence of the ENGINEER. Scheduling of all testing procedures shall be arranged to suit the convenience of the ENGINEER. For detailed description of tests, refer to individual trade specifications.

(3) Upon completion of his work, the CONTRACTOR shall perform tests and inspections of all equipment, material and wiring in his contract as directed by and in the presence of the ENGINEER or his representatives to determine whether all provisions of these Specifications and Drawings have been fulfilled. Wiring shall be tested for proper connections, short circuits and grounds using suitable testing instruments. All equipment shall be tested for proper performance. Upon completion of all tests to the satisfaction of the ENGINEER and upon delivery to the ENGINEER of all necessary certificates of approval, including final inspection certificates, the job will be accepted by and turned over to the OWNER.

E. SUBMITTALS

Shop Drawings. Shop Drawings (6 copies) are required for the following:

(1) Detailed Manufacturer's Data on the lighting. Additionally, any U.L. Testing Reports that may be required.

The CONTRACTOR shall submit all shop drawings in accordance with the following procedure:

(a) Include on transmittal sheet, number of copies submitted, the specification page and section number that the item is submitted under, and the CONTRACTOR's submittal number.

Additional Submittals. Additional submittals required are as follows:

- (1) Design calculations and details of the connection of the pole base to the concrete pier.
- (2) Warranty
 - (a) Manufacturer shall warrant in writing the entire structure (excluding fuses and lamps) to be free from defects in materials and workmanship for a period of seven years starting from the date of delivery.
 - (b) Manufacturer agrees in writing to provide labor and materials for a period of two years to replace defective parts or repair defects in workmanship, or, at its election, to pay reasonable costs of labor for such repairs. For the remainder of the warranty period, replacement materials will be provided at no charge.
 - (c) Lamps shall be warranted by the manufacturer in writing not to fail for two years from the date of delivery. Lamps which fail during the first year of the warranty period will be replaced and installed at no cost to the OWNER. Lamps which fail during the second 12 months will be replaced by the manufacturer but installation will be the OWNER's responsibility.
 - (d) Manufacturer warrants in writing accurate alignment of the luminaries on the luminaire assembly for a period of seven years starting from the date of delivery.
 - (e) The CONTRACTOR shall furnish to the OWNER of the facility 5% extra lamps and 6 extra fuses for future use.

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Article 13 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph 6.17 of the General Conditions.

F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by the ENGINEER prior to the Applications for Payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

- (1) Payment for Windward Beach – Entrance Area Lighting (2A) and Windward Beach – Sidewalk Lighting (2B) will be made at the Lump Sum price bid for these items in the Schedule of Prices in the Bid Form, which price shall include furnishing and installing poles, footings and all other materials specified; removal of trees branches as required; shop drawings; all permits and fees, and all other work and materials described hereinabove.

TECHNICAL SECTION 3. SPORTS LIGHTING

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **LIGHTING** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as ITEMS in the Schedule of Prices in the Bid Form, and these ITEMS may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEMS applicable to this Section are:

DRUM POINT RECREATION COMPLEX LIGHTING (3A) **VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)**

Laws and Regulation. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work included under this Section attention is directed to the specific requirements of:

- (1) National Electrical Code
- (2) N.J. State Electrical Subcode
- (3) Local and Municipal Codes

Additional Information. Additional information for all or part of the work included under this section is as follows:

- (1) For ballfield lighting, there shall be provided a U.L. listing for all electrical components from its connection to the feeder conductors, to its completion at the lamp socket including all connections. This listing shall be based upon U.L. testing and evaluation of the compatibility of the enclosures and the components for use in combination in this application in addition to the individual components being U.L. listed or recognized.

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

DRUM POINT RECREATION COMPLEX LIGHTING (3A)

The manufacturer shall supply lighting equipment and computer generated point by point analysis to meet the following:

Lighting Performance:

(1) Performance Criteria

- a. The computer generated performance of the system shall be based on 155,000 lumens per lamp, initiating calculations for both initial and target footcandle levels.
- b. The performance criteria requires lighting equipment which will provide initial average light levels, after adjustment for an average lamp tilt factor, of 9.84 footcandles on soccer field #5 and 9.82 footcandles on soccer field #6. A factor of .8 is to be applied in determining the target light value, in addition to the above adjustment for an average lamp tilt factor. These factors applied will result in a target lighting level of 7 footcandles on both soccer fields.
- c. Light levels shall be derived from the equation of light loss factor (LLF) = ambient temperature factor (ATF) x voltage factor (VF) x ballast factor (BF) x lamp tilt factor (LTF) x lamp lumen depreciation (LLD) x luminaire dirt depreciation (LDD) per I.E.S. RP-6-88 and shall be calculated as follows:
 - (1) Initial Light Levels = ambient temperature factor (ATF) x voltage factor (VF) x ballast factor (BF) x lamp tilt factor (LTF)
 - (2) Target Light Levels = Initial light levels x lamp lumen depreciation (LLD) x luminaire dirt depreciation (LDD).
- d. Uniformity ratio - The footcandle level shall have a uniformity ratio or maximum to minimum ratio of not greater than 8.9:1 on soccer field #5, 8.1:1 on soccer field #6.
- e. Kilowatt consumption - The kilowatt consumption of the entire system shall not exceed 16.00 kilowatts per hour.

(2) Spill/Glare Light - Designated Areas

- a. Spill/Glare Light Beam Definition - The approved lighting fixture shall not exceed the candlepower of specified degrees above the maximum candlepower in the vertical plane as specified in the following table. 12,000 candlepower is the unit of luminous intensity that often begins to cause discomfort and interfere with vision.

Nema Type Reflector	Candlepower	Degrees Above the Center of the Beam in the Vertical Plane
2H x 3V	12,000	26 degrees
3H x 3V	12,000	25 degrees
4H x 4V	12,000	24 degrees
5H x 5V	12,000	30 degrees
6H x 5V	12,000	34 degrees

- b. Lower beam definition - To further define the fixture beam, the minimum candlepower that may be achieved below the center of the beam is described in the following table. Photometric reports from an independent testing laboratory must be provided to prove the capability of achieving specified performance:

Nema Type Reflector	Minimum Candlepower to be Achieved	Degrees Below the Center of the Beam in the Vertical Plane
2H x 3V	1,027,400	-1.5 degrees
3H x 3V	553,400	-1.5 degrees
4H x 4V	350,000	-1.1 degrees
5H x 5V	202,560	-4.0 degrees
6H x 5V	154,500	-4.0 degrees

Point By Point Analysis:

Computer Models - Test Stations

(1) (For soccer fields) Submitted computer models shall depict the field test stations for each field as 35 points covering 210' x 150' on an equally spaced 30' x 30' grid. Bidder shall submit two (2) different models, one depicting initial design and the second depicting target light levels with described maintenance factor applied for each field.

(2) Submitted spill/glare computer models shall depict the field test stations as being on a line 150' from the boundary of the playing field, and the test stations shall be shown every 30' along the line. Bidder shall submit two (2) different models, as described below:

- a. Initial Horizontal footcandles - models shall represent readings taken with the meter positioned horizontal 36 inches above grade.
- b. Initial Maximum footcandles - models shall represent readings taken with the test cell positioned 36 inches above grade and aimed at the brightest light source.

Inspection and Verification:

Test and Measurement Procedures

- (1) Testing of the facility shall be done based on the test stations as described in section B.1. and Measurement Procedures
- (2) All testing will be done with entire facility illuminated.
- (3) Horizontal footcandle readings shall be measured with the test cell positioned horizontal 36 inches above grade.
- (4) Maximum footcandles shall be measured with the test cell positioned 36 inches above grade and aimed at the brightest light source from the tested field.
- (5) Testing equipment for measurement of footcandle levels shall be a Gossen Panalux Electronic 2 or an approved equal, calibrated and certified within the previous 12 months.
- (6) For final approval of the project the manufacturer shall provide a final report from the test results that shall provide the following items:
 - a. Identification of number and location of the test stations, that shall agree in number and location with description provided in B.1.
 - b. Actual horizontal footcandle readings taken at each test station.
 - c. Actual maximum footcandle readings taken at each spill/glare test station
 - d. Number of hours of operation and number of system starts.

Light-Structure System:

(1) General Description - The Light-Structure System as manufactured by Musco Sports Lighting, Model #LS-SC2-1500 shall consist of the listed equipment features below.

- a. Pre-stressed centrifugally spun concrete base
- b. Hot-dip galvanized steel shafts.
- c. Hot-dip galvanized steel crossarms.

- d. Fixture consisting of: lamp, lamp socket, reflector, lens, lamp cone, reinforcing retaining ring.
- e. UL listed fusing for the lamp circuits.
- f. Enclosure to consist of: NEMA 3R enclosure with ballasts and capacitors.
- g. Thermal magnetic circuit breaker utilized as a local electrical disconnecting device.
- h. All wiring from the load side of the breaker to the lamp socket.
- i. Plug-in or landing lug connection devices for all electrical circuits on the pole.
- j. Aiming method for alignment of the luminaires.
- k. Method for re-alignment of the luminaire after movement for relamping.

Luminaire Structure:

- (1) Factory Construction: The lamp and reflector mounting device shall be factory assembled to the crossarms and the crossarms shall be attached to a section of the pole by the manufacturer.
- (2) Single Photometric Unit - Each reflector shall be attached to the crossarm in such a way that its aiming position has been determined relative to all other fixtures on the pole so that in the factory all luminaires on the assembly are oriented to form a single photometric unit.

Lamps:

- (1) Lamps shall be 1500 watt metal halide and shall meet ANSI designation M48PC-1500BU and be Philips MH1500BU (Z lamp orientation) or an approved equal.
- (2) Lamps shall be 1500 watt metal halide and shall be manufactured by GE, Philips, or Sylvania.
- (3) Venture lamps will not be used and no other type of lamps will be considered.
- (4) The reflector shall be fastened to the lamp cone with a reinforcing retaining ring containing an acrylic compressed fiber ring which centers and stabilizes the lamp in the reflector and provides heat shield to protect the lamp socket from heat.
- (5) Lamp Orientation - "Base Up" lamps must be used. Horizontal optics will not be considered.

- (6) Reflector and Lamp Supports - The reflector shall be fastened to the lamp cone utilizing six (6) #10 stainless steel screws. A reinforcing retaining ring fabricated from fiberglass with a supplemental heat resistant and heat reflective coating shall be used to center and stabilize the lamp in the reflector and provide a shield to protect the lamp socket from heat.
- (7) Lens - A removable lens of impact and thermal resistant glass with silicone gasket shall be centered in a stainless steel lens rim and attached to the reflector with a minimum of four hardened stainless steel clamps. The lens shall further be secured to the reflector with a hinged cable or chain to prevent it from falling after removal during re-lamping or servicing.
- (8) Pole Cap - A removable pole cap shall be provided to prevent moisture or foreign debris from entering the top of the pole. The pole cap shall be made from cast aluminum or iron. Aluminum pole caps shall have a supplemental coating of polyester or polyurethane powder coat paint, while cast iron pole caps shall be hot dip galvanized.

The pole cap shall be secured to the pole top assembly with a single, 3/8" stainless steel bolt with a gasketed head to prevent moisture drainage on the inside of the pole top assembly. It shall further be secured by a stainless steel aircraft type cable to prevent it from being mis-placed during installation and to ensure it does not fall during removal for repair or service work.
- (9) Aiming - The manufacturer shall provide a memory positioning device for each luminaire on the assembly. The device shall provide for automatic repositioning of the aiming after relamping.
- (10) Field Alignment - Luminaire assembly shall be provided from the factory to the job site as a unit which may be universally oriented in a manner that the entire luminaire assembly can be field aimed as a single unit
- (11) Materials and Coatings - All steel components shall be hot dip galvanized to the most current ASTM A-123 standards. High purity reflector grade aluminum shall be alzak finished. All other aluminum components shall be polyester or polyurethane powder coat painted and/or anodized to MIL-A-8625E specifications and coated with a clear thermoset polymer. All non-current carrying fasteners, hinges, and latches shall be stainless steel and cadmium plated or coated with a thermoset epoxy type organic coatings such as Empigard to prevent galvanic interaction.
- (12) Crossarm Welding - Crossarms for the luminaire assembly shall be welded to the pole section before galvanizing by American Welding Society certified welders. Any additional fasteners used for the attachment of accessories to the crossarm shall be stainless steel and cadmium plated or coated with Empigard or equivalent. All weld joints utilized will be pre-qualified per the American Welding Society or qualified by an AWS certified inspector or testing firm.

- (13) Structural Strength - The crossarm, reflector and their method of attachment shall be provided by the manufacturer such that it will structurally withstand winds of 125 mph winds with 1.3 gust factor without misalignment of any luminaire and without any damage to the crossarms or its components. Luminaires shall be attached to the crossarm by a minimum of two bolts, which fasteners shall be stainless steel and Empigard coated. There shall be no penetrations of the top or sides of the crossarm.

VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)

The manufacturer shall supply lighting equipment and computer generated point by point analysis to meet the following:

Lighting Performance:

Performance Criteria - Field Lighting

The computer generated performance of the system shall be based on 155,000 lumens per lamp, initiating calculations for both initial and target footcandle levels.

- a. The performance criteria requires lighting equipment which will provide initial average light levels, after adjustment for an average lamp tilt factor, of 9.78 footcandles on the soccer fields. A factor of .8 is to be applied in determining the target light value, in addition to the above adjustment for an average lamp tilt factor. These factors applied will result in a target lighting level of 7.0 footcandles on the soccer fields.
 - b. Light levels shall be derived from the equation of light loss factor (LLF) = ambient temperature factor (ATF) x voltage factor (VF) x ballast factor (BF) x lamp tilt factor (LTF) x lamp lumen depreciation (LLD) x luminaire dirt depreciation (LDD) per I.E.S. RP-6-88 and shall be calculated as follows:
 - (1) Initial Light Levels = ambient temperature factor (ATF) x voltage factor (VF) x ballast factor (BF) x lamp tilt factor (LTF)
 - (2) Target Light Levels = Initial light levels x lamp lumen depreciation (LLD) x luminaire dirt depreciation (LDD).
 - c. Uniformity ratio - The footcandle level shall have a uniformity ratio or maximum to minimum ratio of not greater than 6.5:1 on the soccer fields.
 - d. Kilowatt consumption - The kilowatt consumption of the entire system shall not exceed 25.60 kilowatts per hour.
- (1) Spill/Glare Light
- a. Maximum spill light values - Light levels shall not exceed the designated maximum footcandles or average footcandles shown below. These levels shall be shown as initial footcandles and shall be measured at a distance of 150' from the boundary of the playing field in any direction.

150' From Field Boundary	Horizontal Footcandles	Footcandles with meter aimed toward brightest light bank
Maximum Footcandles	9.71	7.62
Average Footcandles	0.12	0.55

- b. Arc Tube Brightness (Luminance) - No portion of any arc tube shall be visible beyond 12 degrees vertical and 35 degrees horizontal measured from the center axis line of the light output in the direction of the defined problem.
- c. Beam Definition - No one fixture shall exceed the candlepower at the specified degrees above the maximum candlepower in the vertical plane as specified in the following table:

Nema Type Reflector	Candlepower	Degrees Above Maximum Candlepower in Vertical Plane
Nema 3	12,000	21 degrees
Nema 4	12,000	21 degrees
Nema 5	12,000	32 degrees
Nema 6	12,000	32 degrees

Point by Point Analysis

Computer Models - Test Stations

- (1) (For soccer fields) Submitted computer models shall depict the field test stations as 143 points covering 360' x 300' on an equally spaced 30' x 30' grid. Bidder shall submit two (2) different models, one depicting initial design and the second depicting target light levels with described maintenance factor applied.
- (2) Submitted spill/glare computer models shall depict the field test stations as being on a line 150' from the boundary of the playing field, and the test stations shall be shown every 30' along the line. Bidder shall submit two (2) different models, as described below:
 - a. Initial Horizontal footcandles - models shall represent readings taken with the meter positioned horizontal 36 inches above grade.
 - b. Initial Maximum footcandles - models shall represent readings taken with the test cell positioned 36 inches above grade and aimed at the brightest light source.

Inspection and Verification:

Test and Measurement Procedures

- (1) Testing of the facility shall be done based on the test stations as described in section B.1. Test and Measurement Procedures
- (2) All testing will be done with entire facility illuminated.
- (3) Horizontal footcandle readings shall be measured with the test cell positioned horizontal 36 inches above grade.
- (4) Maximum footcandles shall be measured with the test cell positioned 36 inches above grade and aimed at the brightest light source from the tested field.
- (5) Testing equipment for measurement of footcandle levels shall be a Gossen Panalux Electronic 2 or an approved equal, calibrated and certified within the previous 12 months.
- (6) For final approval of the project the manufacturer shall provide a final report from the test results that shall provide the following items:
 - a. Identification of number and location of the test stations, that shall agree in number and location with description provided in B.1.
 - b. Actual horizontal footcandle readings taken at each test station.
 - c. Actual maximum footcandle readings taken at each spill/glare test station
 - d. Number of hours of operation and number of system starts.

Lighting Structure System:

General Description - The Light-Structure System as manufactured by Musco Sports Lighting, Model #LS-LV8-1500 shall consist of the listed equipment features below.

- (1) Pre-stressed centrifugally spun concrete base
- (2) Hot-dip galvanized steel shafts.
- (3) Hot-dip galvanized steel crossarms.
- (4) Fixture consisting of: lamp, lamp socket, reflector, lens, lamp cone, reinforcing retaining ring.
- (5) UL listed fusing for the lamp circuits.
- (6) Enclosure to consist of: NEMA 3R enclosure with ballasts and capacitors.
- (7) Thermal magnetic circuit breaker utilized as a local electrical disconnecting device.
- (8) All wiring from the load side of the breaker to the lamp socket.
- (9) Plug-in or landing lug connection devices for all electrical circuits on the pole.
- (10) Aiming method for alignment of the luminaires.

- (11) Method for re-alignment of the luminaire after movement for relamping.

Luminaire Structure:

- (1) Factory Construction - The lamp and reflector mounting device shall be factory assembled to the crossarms and the crossarms shall be attached to a section of the pole by the manufacturer.
- (2) Single Photometric Unit - Each reflector shall be attached to the crossarm in such a way that its aiming position has been determined relative to all other fixtures on the pole so that in the factory all luminaires on the assembly are oriented to form a single photometric unit.
- (3) Lamps - Lamps shall be 1500 watt metal halide and shall meet ANSI designation M48PC-1500BU and be Philips MH1500BU (Z lamp orientation) or an approved equal.

Lamps shall be 1500 watt metal halide and shall be manufactured by GE, Philips, or Sylvania.

Venture lamps will not be used and no other type of lamps will be considered.

Lamp Orientation - "Base Up" lamps must be used. Horizontal optics will not be considered.

- (1) Reflector and Lamp Supports - The reflector shall be fastened to the lamp cone utilizing six (6) #10 stainless steel screws. A reinforcing retaining ring fabricated from fiberglass with a supplemental heat resistant and heat reflective coating shall be used to center and stabilize the lamp in the reflector and provide a shield to protect the lamp socket from heat.
- (2) Lens - A removable lens of impact and thermal resistant glass with silicone gasket shall be centered in a stainless steel lens rim and attached to the reflector with a minimum of four hardened stainless steel clamps. The lens shall further be secured to the reflector with a hinged cable or chain to prevent it from falling after removal during re-lamping or servicing.
- (3) Pole Cap - A removable pole cap shall be provided to prevent moisture or foreign debris from entering the top of the pole. The pole cap shall be made from cast aluminum or iron. Aluminum pole caps shall have a supplemental coating of polyester or polyurethane powder coat paint, while cast iron pole caps shall be hot dip galvanized.

The pole cap shall be secured to the pole top assembly with a single, 3/8" stainless steel bolt with a gasketed head to prevent moisture drainage on the inside of the pole top assembly. It shall further be secured by a stainless steel aircraft type cable to prevent it from being misplaced during installation and to ensure it does not fall during removal for repair or service work.

- (1) Aiming - The manufacturer shall provide a memory positioning device for each luminaire on the assembly. The device shall provide for automatic repositioning of the aiming after relamping.
- (2) Field Alignment - Luminaire assembly shall be provided from the factory to the job site as a unit which may be universally oriented in a manner that the entire luminaire assembly can be field aimed as a single unit.

- (3) Materials and Coatings - All steel components shall be hot dip galvanized to the most current ASTM A-123 standards. High purity reflector grade aluminum shall be alzak finished. All other aluminum components shall be polyester or polyurethane powder coat painted and/or anodized to MIL-A-8625E specifications and coated with a clear thermoset polymer. All non-current carrying fasteners, hinges, and latches shall be stainless steel and cadmium plated or coated with a thermoset epoxy type organic coatings such as Empigard to prevent galvanic interaction.
- (4) Crossarm Welding - Crossarms for the luminaire assembly shall be welded to the pole section before galvanizing by American Welding Society certified welders. Any additional fasteners used for the attachment of accessories to the crossarm shall be stainless steel and cadmium plated or coated with Empigard or equivalent. All weld joints utilized will be pre-qualified per the American Welding Society or qualified by an AWS certified inspector or testing firm.
- (5) Structural Strength - The crossarm, reflector and their method of attachment shall be provided by the manufacturer such that it will structurally withstand winds of 125 mph winds with 1.3 gust factor without misalignment of any luminaire and without any damage to the crossarms or its components. luminaires shall be attached to the crossarm by a minimum of two bolts, which fasteners shall be stainless steel and Empigard coated. There shall be no penetrations of the top or sides of the crossarm.

DRUM POINT RECREATION COMPLEX LIGHTING (3A)
VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)

Wire Harness:

- (1) Strain Relief - The wiring harness shall be supported at the top of the pole by a stainless steel wire mesh grip matched to the size of the harness. There shall be not more than 13 conductors supported by a single wire mesh grip. If harness is longer than 65' an interim wire mesh grip support shall be located approximately half way down the pole.
- (2) Strain Relief Slippage - The wire mesh grip shall be secured to the harness with a cable tie at the bottom of the grip to avoid slipping or loosening.
- (3) Pole Attachment - The wire mesh grip shall be mechanically attached to the pole to an enclosed mounting loop so that it cannot accidentally be removed in any direction.
- (4) Spiral Winding - The harness being supported by the wire mesh grip shall consist of multiple 14 gauge THHN conductors and shall be continuously spiral wound and bound with mylar wrap to prevent slippage of individual conductors within the wiring harness.
- (5) Abrasion Bumper - The wire harness shall be completely encased in flexible abrasion resistant sleeving to alleviate wear on the insulation of the conductors caused by abrading the interior of the pole. The wire harness sleeving shall begin no more than 32 inches from the top of the wire harness and end no more than 5 inches from the bottom of the wire harness. If additional wire mesh grips are provided, the sleeving shall begin no more than 4 inches above and below the grip.

- (6) Labeling - All wiring harness conductors shall be color-coded and clearly labeled.
- (7) Plug-Ins - Each end of the wire harness shall be terminated into a plug-in with conductors sequenced consistent with the pattern of the wiring schematic provided by the manufacturer.
- (8) Testing - All conductors and plug-ins shall be tested for resistance under load, for continuity, schematic sequence, and for insulation integrity. (Manufacturer shall ship with the wire harness a copy of the test results.)
- (9) Grounding - There shall be included within the wiring harness one conductor for the use as a grounding conductor. The grounding conductor shall be equal in size to the load carrying conductors.

Electrical Component Enclosure (ECE):

- (1) NEMA 3R - The ECE shall be a NEMA 3R rated gasketed enclosure to house the ballasts, capacitors, fuses, thermal magnetic circuit breaker, and distribution lugs.
- (2) Material - ECE shall be constructed out of .080" thick 5052-H32 aluminum for high corrosion resistance and thermal conduction. Optional: Steel materials galvanized prior to fabrication will not be accepted.
- (3) Coating - ECE shall be coated with 1.5-2.5 mils of high thermally radiant polyester powder coat paint. Paint shall pass the following performance tests:

<u>Method</u>	<u>Description</u>	<u>Value</u>
ASTM D2794	Dir./Rev. Impact	120 in.-lbs./120in.-lbs.
ASTM D522	Flexibility, Mandrel	1/8" Dia. (no fracture)
ASTM D3363	Pencil Hardness	3H
ASTM D3359	Cross Hatch Adhesion	5B (no loss)
ASTM B117	Salt Spray	1,000 Hrs.

- (4) Two Compartments - The ECE shall be divided into two compartments. The upper compartment shall house the ballasts, capacitors, and fuses. The lower compartment shall provide for the thermal magnetic circuit breaker, distribution lugs, and connection of all circuits coming into and out of the ECE.
- (5) Stainless Steel - All latches, hinges, and non-current carrying fasteners, either outside or inside the enclosure, shall be stainless steel of at least an 18-8 standard. All stainless steel shall be passivated and plated with .0002" thick cadmium to prevent galvanic interaction and to maintain electrical contact for grounding purposes.

- (6) Hinged Door Access - The access door to the ECE shall be attached by a full-length stainless steel or powder coated aluminum hinge and shall be secured when closed by lockable stainless steel latches.
- (7) Pole Attachment - The ECE shall attach to the pole by means of a device which is sufficient to align the ECE and support its weight. There shall be a sealed joint with a non-threaded connection to provide wiring access from the pole to the ECE for both the primary and secondary circuits. The connection shall be gasketed for water-tight protection. All wire passages shall be protected to prevent wire abrasion or damage.
- (8) Capacitors - In the ECE, capacitor cases shall be made from aluminum. The capacitor case shall not make direct contact with surface of the ECE, but shall be mounted on an aluminum channel. The capacitor case shall be grounded to the ECE. Capacitors shall be rated in unison with the ballast to operate the lamps at the specified wattage.
- (9) Disconnecting Device - There shall be provided within the ECE a UL listed thermal magnetic circuit breaker utilized as a local electrical disconnecting device such that electrical power to all equipment on the pole served by the feeder circuit shall be disengaged by the operation of one switch. The breaker shall be located in a compartment separated from any capacitors or ballasts.
- (10) Lugs - The breaker shall provide landing lugs for the conductors which provide power to the pole.
- (11) Distribution Terminal Blocks - There shall be provided by the manufacturer a set of distribution terminal blocks which shall be factory wired from the breaker to the blocks. These blocks shall provide for termination of all ballast connection wiring.
- (12) Fusing - There shall be provided an individual fuse in a supported fuse block for each ballast conductor, except neutral conductors which shall not be fused or switched.
- (13) Plug-In - All lamp supply circuits in the ECE shall be color-coded and labeled and shall terminate into a UL recognized plug-in device located in the lower compartment of the ECE in a manner suitable for plug-in to the wiring harness.
- (14) Wire Harness Connection - The wiring harness circuits from the lamps shall be attached to the ECE circuits by UL recognized plug-in connectors.
- (15) Grounding - There shall be provided in the ECE located in the lower compartment of the enclosure three (3) feet of #6 wire rigidly fastened to the enclosure for attachment to the pole ground lug.
- (16) Ballast Type - There shall be an individual ballast for each luminaire. The ballast shall be a lead peak auto-regulating ballast and be available for use with any standard supply voltage. The ballast shall be located remote from the luminaire crossarm and shall be placed approximately ten (10) feet above ground level. Ballast box must be a NEMA 3R enclosure and must be manufactured by the luminaire assembly manufacturer and all mounting hardware shall be included with the ballast box assembly. The remote ballast system described above shall be located on the same pole as the luminaire assembly in the

NEMA 3R enclosure with the capacitors. The assembly design shall be adaptable to various standard manufactured ballast and must retain UL listing.

- (17) Drawings Attached - The manufacturer shall provide an electrical schematic of the ECE circuits, which schematic shall be of a durable material and affixed to the inside of the ECE door for use by maintenance personnel.
- (18) Location - The ECE shall be attached to the pole with the lower end approximately 10' above grade at the pole foundation.
- (19) UL Listing - The ECE shall be listed by UL both for use with 90 degrees C rated supply conductors and as suitable for use in wet locations.

Lighting Contactor Cabinet (LCC)

- (1) New weatherproof Hennessey (or approved equal) panel enclosure to match existing enclosure. Approximate dimensions of enclosure: 44" wide x 28" deep x 55" high. Exact location to be determined in field by OWNER.
- (2) Lighting contactor enclosure shall be Square D Class 8903 - S x G or approved equal with one (1) LC-2 contactor. LC-2 lighting contactor shall be 100 amp, 3 pole 480V 277 volt coil open type electrically held square D Class 8903-SQD2-VO4.
- (3) Factory-assembled Lighting Contactor Cabinet Safety Factors - The Lighting Contactor Cabinet shall be factory-assembled and wired by a UL Listed panel builder. The LCC shall arrive job site ready for structural attachment to an existing wall, switchgear rack or free standing enclosure. The cabinet shall structurally consist of the following:
 - a. Enclosure Cabinet - To provide protection against corrosion, the contactor cabinet shall be a NEMA 4 rated gasketed enclosure fabricated from 5052 H32 quality aluminum that is at least .10 thick. The enclosure shall be further coated with a polyurethane powder coat paint after fabrication to provide protection from oxidation of the aluminum.
 - b. Cabinet Door - For safety of personnel and equipment, door shall be electrically bonded to the cabinet enclosure. Cabinet door shall utilize a lockable, 3 point latching assembly that provides a NEMA 4 rated seal
 - c. Subpanel - Built-to-order subpanel shall be fabricated from 5052 H32 quality aluminum that is at least .10 thick. The panel shall be pre-punched to specific contactor configurations and further coated with a polyurethane powder coat paint. Panel shall be electrically bonded to the exterior enclosure.
 - d. Cabinet Labeling - For easy identification and maintenance, each enclosure shall contain typical control and power wiring schematics as well as project specific control schematics. For easy installation, each cabinet shall be labeled to match the

field diagrams, pole identification, breaker schedule, and other applicable components.

- (4) Control Wire Terminations - To allow for fast, labor saving installation, the control wire terminations shall be ready to accept plug-in connection from a remote equipment controller and additional contactor cabinets. The control wire terminations shall include UL Listed terminal blocks mounted on a DIN rail and a 600 volt, 16 amp, IEC type fuse holder fused at 10 amps. All control wiring internal to the cabinet shall be type MTW (Machine Tool Wire) rated for 105 degrees C.
- (5) Diagnostic Equipment - To allow for future diagnostic features, the subpanel shall be pre-punched for mounting the diagnostic devices.
- (6) Contactor Modules - For power switching the contactor modules shall be custom configured for 30, 60 and 100 amps.
 - a. Contactors - Contactors shall be UL Listed for lighting applications. They shall be rated at full capacity, be electrically held, utilize a 120 volt coil and be rated for operation in an ambient temperature range of -40 degrees C to +70 degrees C.
 - b. Terminal Blocks - Terminal blocks shall be UL Listed. 30 and 60 amp modules shall be sized to handle 2/0-14 gauge wire. 100 amp modules shall be sized for 350 mcm-6 gauge wire. If required, neutral blocks shall be provided next to the terminal blocks.
- (7) Manual Off-On-Auto Selector Switches - For on-site manual control, three position selector switches (Off-On-Auto) shall be factory-mounted through the Lighting Contactor Cabinet door, or housed in a separate NEMA 4 rated enclosure. The switches shall be keyed and maintain position, with make-before-break contacts. A legend plate shall clearly identify zone and position of each switch. Switches shall be factory-wired to the control terminal blocks.
- (8) Ground Bar - For safety of equipment and personnel, a ground bar that accepts up to 15 #12 to #4 gauge wires shall be provided.
- (9) Warranty - The Lighting Contactor Cabinet shall be covered under the standard warranty for the accompanying Musco product.

Pole Structure:

DRUM POINT RECREATION COMPLEX LIGHTING (3A)

- (1) Safety Factors - The structural design of the poles must be demonstrated to be based on the AASHTO criteria for pole stress allowances.
- (2) Wind Factors - The poles for the multiple soccer field lighting project shall be designed to withstand 80 mph winds based upon BOCA-C-1996 standards. The premise of the wind speed criteria will be the 50 year mean recurrent isotach wind map. Applicable gust factors to be applied per code.

- (3) Height and EPA - The pole shall be designed to provide a mounting height above the surface at its foundation of 80' and to be of sufficient strength to support the effective projected area (EPA) of the pole and all of the attached devices including, as applicable, light fixtures, crossarms, mounting brackets, ballast boxes, and any other devices which are to be attached to the pole.
- (4) Height and EPA - The pole shall be designed to provide a mounting height above the surface at its foundation of 80' and to be of sufficient strength to support the effective projected area (EPA) of the pole and all of the attached devices including, as applicable, light fixtures, crossarms, mounting brackets, ballast boxes, and any other devices which are to be attached to the pole.
- (5) Pole Material - The pole shaft shall be high strength low alloy tapered tubular steel that is equal to current ASTM-A595 standards, with galvanized coating inside and out. All connections of pole sections shall be by slip fitting the top section over the lower section by a length of at least 1.5 times the diameters.
- (6) Resistance to Corrosion - Steel components of the pole shall be hot dip galvanized to current ASTM A-123 standards. Steel portions of the pole shall be constructed such that all segments of the pole can be readily heated to like temperatures in commercially available galvanizing methods.
 - a. To avoid problems of galvanize adherence to differing steel alloys, all steel components used for the pole must be of the same type steel.
 - b. All exposed steel components of the pole shall be at least 18" above the surface of the ground to avoid exposure of the steel to the heavily moisture and oxygen laden air, both above and below the surface. There shall be a cap to cover the top of the pole so that rain will not enter the interior of the pole.

Foundation:

- (1) Safety Factor - The foundation must be designed based on UBC design for foundations.
- (2) Foundation Strength - Any concrete portions of the pole in which steel components that provide tension strength are contained, shall be allowed to harden for a minimum of 28 days before stress loads of pole attachment are applied.
- (3) Concrete Material - The foundation of the pole shall be constructed of not less than 9,500 psi pre-stressed centrifugally cast concrete such that the steel reinforcement within the concrete shall be protected from slippage and exposure to oxidation through voids in the concrete or exposure of the steel through porous concrete material.
- (4) Soil Conditions - The design criteria for these specifications are based on soil conditions achieving at least 2000 psf unconfined compressive strength soil at the surface. It shall be the contractors responsibility to notify the owner of soil conditions other than the design criteria. The owner shall then be responsible and absorb the additional costs associated with:

- a. Providing engineered foundation embedment design by a registered engineer in the State of New Jersey for soils other than specified soil conditions.
 - b. Additional materials required to achieve alternate foundation.
 - c. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.
- (5) Pole foundations shall be constructed per manufacturer's recommendations and per the construction detail located in Appendix B of this specification document.

VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)

Pole Structure:

Poles P1 and P2 will be designed and fabricated with adequate couplings, hand holes, mounting plates and hubs to accept future fixtures to upgrade the lighting on the soccer areas.

- (1) Safety Factors - The structural design of the poles must be demonstrated to be based on the AASHTO criteria for pole stress allowances.
- (2) Wind Factors - The poles for the soccer field lighting project shall be designed to withstand 80 mph winds based upon BOCA-C standards. The premise of the wind speed criteria will be the 50 year mean recurrent isotach wind map. Applicable gust factors to be applied per code.
- (3) Height and EPA - The pole shall be designed to provide a mounting height above the surface at its foundation of 80' and to be of sufficient strength to support the effective projected area (EPA) of the pole and all of the attached devices including, as applicable, light fixtures, crossarms, mounting brackets, ballast boxes, and any other devices which are to be attached to the pole.
- (4) Pole Material - The pole shaft shall be high strength low alloy tapered tubular steel that is equal to current ASTM-A595 standards, with galvanized coating inside and out. All connections of pole sections shall be by slip fitting the top section over the lower section by a length of at least 1.5 times the diameters.
- (5) Resistance to Corrosion - Steel components of the pole shall be hot dip galvanized to current ASTM A-123 standards. Steel portions of the pole shall be constructed such that all segments of the pole can be readily heated to like temperatures in commercially available galvanizing methods.
 - a. To avoid problems of galvanize adherence to differing steel alloys, all steel components used for the pole must be of the same type steel.
 - b. All exposed steel components of the pole shall be at least 18" above the surface of the ground to avoid exposure of the steel to the heavily moisture and oxygen laden air, both above and below the surface. There shall be a cap to cover the top of the pole so that rain will not enter the interior of the pole.

Foundation:

The foundations for P1 and P2 will be designed and fabricated to accommodate future fixtures to upgrade the lighting on the soccer areas.

- (1) Safety Factor - The foundation must be designed based on UBC design for foundations..
- (2) Foundation Strength - Any concrete portions of the pole in which steel components that provide tension strength are contained, shall be allowed to harden for a minimum of 28 days before stress loads of pole attachment are applied.
- (3) Concrete Material - The foundation of the pole shall be constructed of not less than 9,500 psi pre-stressed centrifugally cast concrete such that the steel reinforcement within the concrete shall be protected from slippage and exposure to oxidation through voids in the concrete or exposure of the steel through porous concrete material.
- (4) Soil Conditions - The design criteria for these specifications are based on soil conditions achieving at least 2000 psf unconfined compressive strength soil at the surface. It shall be the contractors responsibility to notify the owner of soil conditions other than the design criteria. The owner shall then be responsible and absorb the additional costs associated with:
 - a. Providing engineered foundation embedment design by a registered engineer in the State of New Jersey for soils other than specified soil conditions.
 - b. Additional materials required to achieve alternate foundation.
 - c. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.
- (5) Pole foundations shall be constructed per manufacturer's recommendations and per the construction detail located in Appendix B of this specification document.

Safety – Special Conditions:

DRUM POINT RECREATION COMPLEX LIGHTING (3B) VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)

- (1) U.L. Listing - There shall be provided a UL listing for all electrical components from its connection to the feeder conductors, to its completion at the lamp socket including all connections. This listing shall be based upon UL testing and evaluation of the compatibility of the enclosures and the components for use in combination in this application in addition to the individual components being UL listed or recognized.
- (2) U.L. Test Report - Bidder shall supply in advance of bid a copy of the complete Underwriters Laboratory report covering the entire luminaire assembly being bid for the owner's review and retention. Partial UL files will not be accepted per the requirements of UL. In addition, bidder must supply proof of most recent Underwriters Laboratory inspection process.
- (3) Codes - Sports Lighting Structure shall meet National Electrical code.

(4) Warranty – 7 Year:

- a. Manufacturer shall warrant in writing the entire structure (excluding fuses and lamps) to be free from defects in materials and workmanship for a period of seven years starting from the date of delivery.
- b. Manufacturer agrees in writing to provide labor and materials for a period of two years to replace defective parts or repair defects in workmanship, or, at its election, to pay reasonable costs of labor for such repairs. For the remainder of the warranty period, replacement materials will be provided at no charge.
- c. Lamps shall be warranted by the manufacturer in writing not to fail for two years from the date of delivery. Lamps which fail during the first year of the warranty period will be replaced and installed at no cost to the owner. Lamps which fail during the second 12 months will be replaced by the manufacturer but installation will be the owner's responsibility.
- d. Manufacturer warrants in writing accurate alignment of the luminaires on the luminaire assembly for a period of seven years starting from the date of delivery.
- e. The contractor shall furnish to the owner of the facility 5% extra lamps and 5 extra fuses for future use.
- f. At the completion of the project and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, actual light performance meter reading shall be taken and verified.
 - (i) If, in the opinion of the Owner or his appointed Representative, the actual minimum performance levels including foot-candles, uniformity ratios, and maximum kilowatt consumptions are not in conformance with the requirements of the performance specifications and submitted information, the Manufacturer shall be liable to any or all of the following:
 - (ii) The Manufacturer shall at his expense provide and install any necessary additional fixtures to meet the minimum lighting standards. The Manufacturer shall also either replace the existing poles to meet the new wind load (EPA) requirements or verify by certification by a licensed structural engineer that the existing poles will withstand the additional wind load.
 - (iii) The Manufacturer shall minimize the Owner's additional long term fixture maintenance and energy consumption costs created by the additional fixtures by reimbursing the Owner the amount of \$1,000.00 (one thousand dollars) for each additional fixture required.
 - (iv) The Manufacturer shall remove the entire unacceptable lighting system and install a new lighting system to meet the specifications.

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Required Execution.

DRUM POINT RECREATION COMPLEX LIGHTING (3A)

- (1) Weight and Size - To permit ease of handling of material at the job site and to avoid damage to the existing facility, no single component of the pole shall be in excess of 3,810 lbs., nor be greater than 41' in length.
- (2) Backfill - The pole base shall be installed in an excavation as prescribed by the UBC standards for foundation design. Concrete backfill is required.
- (3) Assembly - The pole base shall be separate from the pole such that the base may be installed, properly plumbed, and enlarged as to the bearing surface by concrete backfill allowing for inspection prior to the attachment of the steel pole.
- (4) Electrical Wiring - The pole and the luminaires shall be designed such that all wiring remains underground before entering the base of the pole and that no wiring shall be exposed to sun or weather as it transitions through the pole and to the ballast and on to each lamp.

There shall be provided a non-threaded hot-dip galvanized steel or concrete enclosed raceway for transition of the pole feeder conductors from the trench to the ECE.

- (5) Field Connections - All field electrical connections on the pole shall be achieved by UL listed plug-in or lug method of attachment from the load side of the breaker/disconnect to the lamp socket. The feeder and grounding conductors from the service entrance to the pole shall be connected at the pole by landing lugs.

VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (3B)

1. Weight and Size - To permit ease of handling of material at the job site and to avoid damage to the existing facility, no single component of the pole shall be in excess of 3,810 lbs., nor be greater than 41' in length.
2. Backfill - The pole base shall be installed in an excavation as prescribed by the UBC standards for foundation design. Concrete backfill is required.
3. Assembly - The pole base shall be separate from the pole such that the base may be installed, properly plumbed, and enlarged as to the bearing surface by concrete backfill allowing for inspection prior to the attachment of the steel pole.
4. Electrical Wiring - The pole and the luminaires shall be designed such that all wiring remains underground before entering the base of the pole and that no wiring shall be exposed to sun or weather as it transitions through the pole and to the ballast and on to each lamp.

There shall be provided a non-threaded hot-dip galvanized steel or concrete enclosed raceway for transition of the pole feeder conductors from the trench to the ECE.

- (1) Field Connections - All field electrical connections on the pole shall be achieved by UL listed plug-in or lug method of attachment from the load side of the breaker/disconnect to the lamp socket. The feeder and grounding conductors from the service entrance to the pole shall be connected at the pole by landing lugs.

D. TEST AND INSPECTIONS

Contract Requirements. Tests and Inspections for the acceptance of materials and equipment, or Work, shall be conducted in accordance with the Contract Documents, with attention to Paragraph 13.03 of the General Conditions.

Required Tests and Inspections.

(1) The CONTRACTOR shall arrange for inspection by all agencies having jurisdiction over work and shall pay the cost of all inspections and re-inspections.

(2) Before an application for final acceptance of the work will be considered, all tests deemed necessary to shown proper execution of the work shall have been performed and completed in the presence of the ENGINEER. Scheduling of all testing procedures shall be arranged to suit the convenience of the ENGINEER. For detailed description of tests, refer to individual trade specifications.

(3) Upon completion of his work, the CONTRACTOR shall perform tests and inspections of all equipment, material and wiring in his contract as directed by and in the presence of the ENGINEER or his representatives to determine whether all provisions of these Specifications and Drawings have been fulfilled. Wiring shall be tested for proper connections, short circuits and grounds using suitable testing instruments. All equipment shall be tested for proper performance. Upon completion of all tests to the satisfaction of the ENGINEER and upon delivery to the ENGINEER of all necessary certificates of approval, including final inspection certificates, the job will be accepted by and turned over to the OWNER.

(4) Additional testing regarding ballfield lighting is as follows:

- (a) All testing will be done with entire facility illuminated.
- (b) Horizontal foot-candle readings shall be taken with the meter positioned horizontal 36 inches above grade.
- (c) Maximum foot-candles as specified previously under spill/glare light shall be taken with the test cell positioned 36 inches above grade and aimed at the brightest light source.
- (d) Ambient light levels shall be measured at the specified test stations. Maximum ambient foot-candle level explored in all planes for each test station shall be recorded. Once the maximum spill light readings as defined previously under spill/glare light have been recorded, subtract the ambient light readings from the respective foot-candle readings at each test station.

- (e) Testing equipment for measurement of foot-candle levels shall be a calibrated Gossen Panalux Electronic 2 or an approved equal.
- (f) For final approval of the project the manufacturer shall provide a final report from the test results that shall provide the following Items:
 - (1) Identification of number and location of the test stations.
 - (2) Actual horizontal foot-candle readings taken at each test station.
 - (3) Actual spill/glare foot-candle readings taken at each test station.
 - (4) Number of hours of operation.
- (g) Equipment must be on site (30) days from the time the order is received and all order details are complete.

E. SUBMITTALS

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Article 13 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph 6.17 of the General Conditions.

Shop Drawings. Shop Drawings (6 copies) are required for the following:

- (1) Detailed Manufacturer's Data on the ballfield lighting. Additionally, any U.L. Testing Reports that may be required.

The CONTRACTOR shall submit all shop drawings in accordance with the following procedure:

- (a) Include on transmittal sheet, number of copies submitted, the specification page and section number that the item is submitted under, and the CONTRACTOR's submittal number.

Additional Submittals. Additional submittals required are as follows:

- (1) Warranty
 - (a) Manufacturer shall warrant in writing the entire structure (excluding fuses and lamps) to be free from defects in materials and workmanship for a period of seven years starting from the date of delivery.
 - (b) Manufacturer agrees in writing to provide labor and materials for a period of two years to replace defective parts or repair defects in workmanship, or, at its election, to pay reasonable costs of labor for such repairs. For the remainder of the warranty period, replacement materials will be provided at no charge.

- (c) Lamps shall be warranted by the manufacturer in writing not to fail for two years from the date of delivery. Lamps which fail during the first year of the warranty period will be replaced and installed at no cost to the OWNER. Lamps which fail during the second 12 months will be replaced by the manufacturer but installation will be the OWNER's responsibility.
- (d) Manufacturer warrants in writing accurate alignment of the luminaries on the luminaire assembly for a period of seven years starting from the date of delivery.
- (e) The CONTRACTOR shall furnish to the OWNER of the facility 5% extra lamps and 6 extra fuses for future use.

Alternate Submittal – Data to be Provided:

Failure to provide any of the following information with the alternate submittal will be grounds for rejection of the alternate. Each item listed below shall be provided in the form of clear and concise statements and/or plans and drawings which can be easily read and clearly interpreted. Each item shall also be clearly lettered to correspond with the following list. All items shall be assembled in the order indicated and secured or bound in a neat and orderly fashion for easy use and reference. Owner must notify all bidders of any approved alternate by addendum only. Bidders requesting to use equipment other than that specified shall submit at bid opening the following:

- (1) Lighting layout design showing luminaire mounting heights, aiming focus points, reflector types, number of luminaires per pole and kilowatt consumption.
- (2) A drawing of the Sports Lighting Structure meeting or exceeding specified criteria.
- (3) Computer generated point-by-point analysis of field light values as set forth in accordance with lighting performance specifications.
- (4) Complete photometric reports produced by an independent testing laboratory for each type of reflector to be utilized to achieve performance criteria.
- (5) Computer generated spill/glare analysis in accordance with lighting performance specifications.
- (6) Written statements of model number and manufacturer for all equipment bid.
- (7) Written warranty from the manufacturer covering entire structure as outlined in specifications.
- (8) Certified engineer, independent of manufacturer, shall verify and stamp wind load test of luminaire assembly to meet or exceed structural strength as described in specifications. Please note, EPA test does not constitute mis-alignment verification.
- (9) Complete UL Test Report - Bidder shall supply for the owner's review and retention a copy of the Underwriters Laboratory report covering the luminaire assembly being bid.
- (10) Manufacturer shall submit in writing a minimum of five similar lighting projects in the state of New Jersey, where the specifications outlined have been met. Include the project name, contact person and telephone numbers.

- (11) Manufacturer shall submit a letter guaranteeing that foot-candle levels and uniformities as specified will be met. In addition, manufacturer's remedy to deficiencies will be noted.
- (12) There shall be provided by the pole supplier sufficient data and calculations to show that the specified criteria will be met, including a foundation design certified by an engineer in the state of New Jersey. Direct burial poles will not be accepted.

Failure to provide any of the above described documentation will be grounds for immediate rejection.

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Paragraph 13.5 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph SC-13.5.1 of the Supplementary Conditions.

F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by the ENGINEER prior to the Applications for Payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for Drum Point Recreation Complex Lighting (3A) and Veterans Memorial Middle School Lighting (3B) will be made at the Lump Sum price bid for these items in the Schedule of Prices in the Bid Form, which price shall include furnishing and installing light poles; lighting fixtures; hardware and accessories; concrete foundations; electrical component enclosure; electrical cabinet; and all other work and materials described hereinabove.

TECHNICAL SECTION 4. ELECTRICAL WORK

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **ELECTRICAL** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as ITEMS in the Schedule of Prices in the Bid Form, and these ITEMS may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEMS applicable to this Section are:

ELECTRICAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (4A)
ELECTRICAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (4B)
ELECTRICAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (4C)
ELECTRICAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (4D)

Additional Information

(1) Payment for Electrical Work – Windward Beach Entrance Area Lighting (4A) shall include furnishing and installing electrical conduit from the proposed light to the existing electrical panel. The electrical conduit shall be sized to accommodate wiring associated with the site lighting installed under the Windward Beach Sidewalk Lighting (Alternate A1). Payment shall also include electrical connection to the existing electrical panel. A pull box shall be provided for the future installation of electrical service for the proposed sidewalk lighting if the Windward Beach Sidewalk Lighting (Alternate A1) is not awarded as part of this contract.

(1) The Contractor shall be advised that there is extensive underground irrigation and electrical lines, mains and conduits at the Drum Point Recreation Complex. The Contractor shall have existing underground utilities marked out prior to the installation of electrical conduit. The location of the existing irrigation mains and lines and electrical conduits for the field lighting and irrigation controls are approximate and must be verified in the field by the Contractor. Electrical connection to the existing panel in the concession building shall be made through the existing conduit stub from the electrical room and under the existing concrete sidewalk.

(2) Payment for Electrical Work – Veterans Memorial Middle School Lighting (4D) shall include all labor, equipment and materials to install electrical wiring and conduit from the two (2) proposed light poles to the pull box termination point. Furnishing and installing conduit and wiring from the pull box to the future transformer and electrical connection to the future transformer shall be made under a future contract.

Laws and Regulations. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work included under this Section attention is directed to the specific requirements of:

- (1) All provisions of the National Electrical Code.
- (2) State Electrical Subcode.

Additional Information. Additional information for all or part of the work included under this Section is as follows:

- (1) The CONTRACTOR shall perform all electrical work in accordance with the Supplemental Specifications included under Appendix No. 1 of this document.
- (2) Under this Section, the CONTRACTOR shall furnish all materials, labor and equipment to construct new underground service entrance, service entrance cabinets as shown on the drawings, underground conduit and wiring, wiring for sports lights and test all systems. Some components for light systems are furnished and installed under other Sections of the Contract. Electrical SUBCONTRACTOR shall coordinate these items with the General CONTRACTOR so that complete functioning systems are installed.
- (3) All work to be accomplished under this Contract shall be in strict conformance with the provisions of the current editions of the National Electric Code and State Electrical Subcode. In addition, the CONTRACTOR shall obtain all permits and pay all fees as may be required for the construction of the electrical work for this project. Upon completion of the construction of the work, the CONTRACTOR shall furnish the OWNER with a Certificate of Inspection and Approval from the Authority having jurisdiction over the electrical work.
- (4) The CONTRACTOR shall be responsible for coordination with and work required by the GPU Power Company. Additional work required by the power company shall be installed by the CONTRACTOR at no additional cost to the OWNER.
- (5) Payment for Electrical Work – Veterans Memorial Middle School Lighting (4D) shall include furnishing and installing electrical conduit and wiring as designed on the construction plans and terminating conduit and wiring at the pull box as indicated on the drawings. Payment for furnishing and installing conduit and wiring and electrical connection to the future transformer shall be made under a future contract.

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

ELECTRICAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (4A)
ELECTRICAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (4B)
ELECTRICAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (4C)
ELECTRICAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (4D)

(1) All materials and equipment shall be accordance with the Supplemental Specifications included in Appendix No. 1 of this document.

(2) Electrical pull boxes hall be 11" x 18" Composite© as manufactured by Quazite© or approved equal. Enclosures and covers shall be green and rated for no less than 8,000 lbs. Over a 10" x 10" area and be designed and tested to temperatures of -50°F. Material compressive strength should be no less than 11,000 p.s.i. Cover shall be locking type cover, non-skid, model #PC1118CA00 and shall read "Electrical". Boxes shall be stackable for extra depth, model #PC1118BB18 with two (2) mouseholes and open bottom.

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Supplemental Contract Requirements. It shall be the responsibility of the CONTRACTOR to obtain all permits for the Electrical Work and to pay all fees associated with said permits.

Required Execution.

ELECTRICAL WORK – WINDWARD BEACH ENTRANCE AREA LIGHTING (4A)
ELECTRICAL WORK – WINDWARD BEACH SIDEWALK LIGHTING (4B)
ELECTRICAL WORK – DRUM POINT RECREATION COMPLEX LIGHTING (4C)
ELECTRICAL WORK – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (4D)

(1) All electrical work shall be in accordance with the Supplemental Specifications included in Appendix No. 1 of this document.

(2) Wherever possible, conduit shall be installed in lawn, grass or field areas. The CONTRACTOR shall minimize disturbance to paved and concrete areas and fencing.

(3) Prior to bidding, the CONTRACTOR should visit each site to determine the exact extent of the work involved.

D. TEST AND INSPECTIONS

Contract Requirements. Tests and Inspections for the acceptance of materials and equipment, or Work, shall be conducted in accordance with the Contract Documents, with attention to Paragraph 13.03 of the General Conditions.

E. SUBMITTALS

Shop Drawings. Shop Drawings (6 copies each) for the following are to be submitted to the ENGINEER prior to construction.

- (1) Schematic electrical Construction Drawings.
- (2) Detailed Manufacturer's Data on all electrical components and equipment.
- (3) Detailed Manufacturer's Data on pull boxes

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Article 13 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph 6.17 of the General Conditions.

- (1) Certificate of Electrical Inspection.

F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by ENGINEER prior to the Applications for payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

- (1) Payment for Electrical Work – Windward Beach Entrance Area Lighting (4A), Electrical Work – Windward Beach Sidewalk Lighting (4B), Electrical Work – Drum Point Recreation Complex Lighting (4C) and Electrical Work – Veterans Memorial Middle School Lighting (4D) will be made at the Lump Sum price bid for these items in the Schedule of Prices in the Bid Form, which price shall include furnish all materials, labor and equipment to construct new underground service entrance, underground conduit and wiring, pull boxes, permits and fees, testing of all systems and all other work and materials described hereinabove.

TECHNICAL SECTION 5. CONCRETE WORK

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **CONCRETE WORK** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as ITEMS in the Schedule of Prices in the Bid Form, and these ITEMS may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEMS applicable to this Section are:

CONCRETE SIDEWALK, 4" THICK (5A)
CONCRETE CURB (5B)

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

CONCRETE SIDEWALK, 4" THICK (5A)

(1) Concrete shall be air entraining Portland cement in accordance with ASTM Specifications C94, proportioned to have a minimum compressive strength of 4,500 PSI at 28 days (ACI 318).

(2) Concrete walk expansion joints shall be preformed non-extruding material 1/2" in thickness. Wood shall not be used.

(3) Joint filler for concrete curb shall be preformed, bituminous cellular type.

(4) Aggregate subbase shall consist of Dense Graded Aggregate, NJDOT Section 901, or crushed concrete.

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Required Execution.

CONCRETE SIDEWALK, 4" THICK (5A)

- (1) Concrete sidewalk shall be constructed in accordance with Section 607 of the NJDOT Specifications.
- (2) Forms shall be set to provide the grades and cross-slopes specified.
- (3) Walks shall be divided into sections equal to its width, by contraction joints. Expansion joints shall be constructed at 20 ft. intervals and where sidewalks meet curbs, or abut existing construction.
- (4) Sidewalks shall have a light broom finish with the striations perpendicular to traffic. The edge of each slab shall be rounded with a suitable tool.

CONCRETE CURB (5B)

- (1) Concrete curb shall be constructed as shown on the Drawings. Excavation and grading shall be done by hand or with suitable equipment which will not disturb the subgrade.
- (2) Concrete curb shall be constructed in accordance with Section 605 of the NJDOT Specifications.
- (3) Concrete curb shall be formed to the dimensions, lines and grades provided on the Drawings or as directed by the ENGINEER. Forms shall be placed to the required grades and set to provide a straight or uniformly curved curb alignment.
- (4) The new curb shall be constructed so that a 6 inch exposed curb face is provided after final paving. Particular care is to be exercised in the placing and compacting of the subgrade so that there will be no depressions or bumps when the work is completed.
- (5) The curb shall be float finished and the corners shall be rounded with a suitable tool.
- (6) Concrete curb shall be depressed where indicated on the construction drawings.
- (7) Concrete curb damaged as a result of this contract shall be removed and replaced as necessary.

D. TESTS AND INSPECTIONS

Not Applicable this Section.

E. SUBMITTALS

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Article 13 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph 6.17 of the General Conditions.

Submittals. Submittals required are as follows:

(1) An approved New Jersey Department of Transportation concrete mix design shall be submitted for all concrete. The approved design shall be submitted to the ENGINEER prior to the installation of any material.

F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by ENGINEER prior to the Applications for Payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

Quantities. Unit Price Work quantities will be determined in accordance with Paragraph 9.08 of the General Requirements for the method and measurement for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for Concrete Sidewalk, 4" Thick (5A) will be made at the Square Foot price bid for this item in the Schedule of Prices in the Bid Form, which price shall include excavation, grading, compaction, forming, constructing new sidewalk and all other work and materials described hereinabove.

(2) Payment for Concrete Curb (5B) will be made at the Linear Foot price bid for this item in the Schedule of Prices in the Bid Form, which price shall include all concrete work and materials, forming, excavation, grading, aggregate subbase, bituminous stabilized base, bituminous concrete surface course, sawcutting, removal and disposal of excavated material, and all other work and materials described hereinabove.

TECHNICAL SECTION 6. RESTORATION

A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **RESTORATION** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed by ITEMS in the Schedule of Prices in the Bid Form, and these ITEMS may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEMS applicable to this Section are:

SITE RESTORATION – WINDWARD BEACH ENTRANCE AREA LIGHTING (6A)
SITE RESTORATION – WINDWARD BEACH SIDEWALK LIGHTING (6B)
SITE RESTORATION – DRUM POINT RECREATION COMPLEX LIGHTING (6C)
SITE RESTORATION – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (6D)
TOPSOIL, FERTILIZE AND SEED (6E)

Additional Information

(1) Payment for Site Restoration – Windward Beach Entrance Area Lighting (6A) shall include all labor, equipment and materials required for the restoration of bituminous pavement, curb, fence, landscaping, lawn and any other surface damaged or disturbed as a result of this contract. Pavement shall be restored in accordance with the trench restoration construction detail. All areas damaged or disturbed as a result of this contract shall be restored to the original, preconstruction condition and texture.

(2) Payment for Site Restoration – Windward Beach Sidewalk Lighting (6B) shall include all labor, equipment and materials required for the restoration of bituminous pavement, curb, fence, landscaping, lawn and any other surface damaged as a result of this contract. Pavement shall be restored in accordance with the trench restoration construction detail. All areas damaged or disturbed as a result of this contract shall be restored to the original, preconstruction condition and texture.

(3) Payment for Site Restoration – Drum Point Recreation Complex Lighting (6C) shall include all labor, equipment and materials required for the restoration of lawn, sod and woodchip areas and fence disturbed or damaged as a result of this contract. All areas damaged or disturbed as a result of this contract shall be restored to the original, preconstruction condition and texture.

(4) Payment for Site Restoration – Veterans Memorial Middle School Lighting (6D) shall include all labor, equipment and materials required for the restoration of any lawn, sod or fencing disturbed or damaged as a result of this contract.

Laws and Regulations. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work under this Section, attention is directed to the specific requirements of:

- (1) New Jersey Soil Erosion and Sediment Control Act Chapter 251, P.L., 1975 (NJSA 4:24-39 et. seq.).

B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Supplemental Requirements. All materials for Restoration of Permanent Vegetative Cover shall be in accordance with the current "Standards for Soil Erosion and Sediment Control in New Jersey".

Required Materials and Equipment.

SITE RESTORATION – WINDWARD BEACH ENTRANCE AREA LIGHTING (6A)
SITE RESTORATION – WINDWARD BEACH SIDEWALK LIGHTING (6B)
SITE RESTORATION – DRUM POINT RECREATION COMPLEX LIGHTING (6C)
SITE RESTORATION – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (6D)
TOPSOIL, FERTILIZE AND SEED (6E)

Site Restoration

- (1) Existing chain link fence, concrete sidewalk, concrete curb, bituminous pavement, athletic fields, wood chip areas, sod and other site improvements damaged or disturbed during construction shall be replaced in kind.
- (2) Concrete for sidewalk and curb shall be air-entrained Portland Cement in accordance with ASTM Specifications C94, proportioned to have a minimum compressive strength of 4,000 psi at 28 days (ACI 318).
- (3) Bituminous concrete for electrical conduit trench restoration shall be Type FABC, Mix I-5. Bituminous concrete shall conform to NJDOT Specifications.
- (4)

Topsoil, Fertilize and Seed

- (1) Topsoil for Permanent Vegetative cover shall be the existing organic surface material stripped from the Site of Work or imported topsoil if none exists on site. Fertilizer and lime shall be added to the existing material to produce a topsoil with a minimum organic content of 3% and a pH of between 5.8 and 6.5.

(2) Fertilizer shall be a complete commercial fertilizer with a commercial designation of 10-20-10 or any 1-2-1 ratio fertilizer containing a minimum 5 percent nitrogen, 10 percent phosphoric acid and 5 percent soluble potash respectively.

(3) Lime shall be pulverized dolomitic limestone, equivalent to 50% calcium plus magnesium oxide.

(4) Permanent grass seed mixture shall consist of 60% Tall Fescue, 20% Fine Fescue and 20% Ryegrass. Tall Fescue shall be Rebel, Falcon or Olympic. Fine Fescue shall be Chewings Red or Creeping Red. Ryegrass shall be Manhattan, Citation or Pennfire.

(5) Each shipment of grass seed mixture shall be accompanied by a certified weight slip, and an analysis of the composition, purity and germination of the seed mixture certified by the seed house and furnished at the time of delivery.

(6) Mulch shall be unrotted small grain straw, hay or salt hay to be applied to seeded surfaces.

C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.03 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Required Execution.

SITE RESTORATION – WINDWARD BEACH ENTRANCE AREA LIGHTING (6A)
SITE RESTORATION – WINDWARD BEACH SIDEWALK LIGHTING (6B)
SITE RESTORATION – DRUM POINT RECREATION COMPLEX LIGHTING (6C)
SITE RESTORATION – VETERANS MEMORIAL MIDDLE SCHOOL LIGHTING (6D)
TOPSOIL, FERTILIZE AND SEED (6E)

Site Restoration

(1) If required, existing chain link fence and other site improvements shall be removed, stored, and preserved during the course of construction. Upon completion, these items shall be replaced at their original locations.

Topsoil, Fertilize and Seed

(1) Place approved topsoil material at a minimum thickness of 4 inches over all disturbed areas.

(2) Compact topsoil with a compactive effort at least equivalent to 2 passes of grading or similar equipment, or a rubber-tire roller. A pass is defined as 1 passage of 1 tire or other contacting surface over the entire layer of material.

- (3) All stones, roots, debris and other unsuitable material shall be raked out of topsoil.
- (4) Apply fertilizer at a minimum rate of 1200 pounds per acre or greater as determined by the topsoil test results.
- (5) Apply seed at a rate of 250 pounds per acre.
- (6) Seeding shall be accomplished using suitable equipment to drill seed into the topsoil and provide a uniform application over the planting area. The CONTRACTOR shall at the end of any day's seeding, place mulch over the newly seeded areas to protect the seed bed from erosion until the seed has germinated.
- (7) Apply mulch at a rate of 2 tons per acre and anchor using a liquid mulch binder.
- (8) It is required that a clean, thick stand of grass results from the work of this Section, of a quality and density satisfactory to the OWNER. It is the CONTRACTOR's responsibility to protect all seeded areas from damage by trespass or erosion and to replace any defective areas as found necessary during the maintenance period of this Contract. The CONTRACTOR will be required to repair or replace any topsoiling, seeding and mulching that is defective or becomes damaged.

D. TESTS AND INSPECTIONS

Contract Requirements. Tests and Inspections for the acceptance of materials and equipment, or Work, shall be conducted in accordance with the Contract Documents, with attention to Paragraph 13.03 of the General Conditions.

Required Tests and Inspections.

- (1) The CONTRACTOR shall have the topsoil tested by a laboratory to determine pH, organic content and the amounts of peat, lime, and fertilizer which must be added to the topsoil to ensure a good stand of vegetation.

E. SUBMITTALS

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Article 13 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph 6.17 of the General Conditions.

- (1) An approved New Jersey Department of Transportation Mix Design shall be submitted for all bituminous concrete. The approved design shall be submitted to the ENGINEER prior to the installation of any material.

- (2) Copy of all topsoil test results.

Affidavits. Affidavits of Material or Equipment compliance shall be submitted from manufacturer certifying that material or equipment complies with specification for the following:

- (1) Seed Certification.

F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by ENGINEER prior to the Applications for Payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

Quantities. Unit Price Work quantities will be determined in accordance with Paragraph 9.08 of the General Requirements for the method and measurement for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for Site Restoration – Windward Beach Entrance Area Lighting (6A), Site Restoration – Windward Beach Sidewalk Lighting (6B), Site Restoration – Drum Point Recreation Complex Lighting (6C) and Site Restoration – Veterans Memorial Middle School Lighting (6D) will be made at the Lump Sum price bid for this item in the Schedule of Prices in the Bid Form, which price shall include reinstalling all items removed for construction; replacing (in kind) all items damaged during construction including fences, and concrete walks; general clean up; and all other work and materials described hereinabove.

(2) Payment for Topsoil, Fertilize and Seed (6E) will be made at the Square Yard price bid for this item in the Schedule of Prices in the Bid Form, which price shall include all the work and materials described hereinabove.

APPENDIX NO. 1

SUPPLEMENTAL ELECTRICAL SPECIFICATIONS

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

1.1 GENERAL

- A. Submittals: Submit Product Data for supporting devices and electrical identification.
- B. Comply with NFPA 70 for components and installation.
- C. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
 - 1. The Terms "Listed and Labeled": As defined in the National Electrical Code, Article 100.

1.2 PRODUCTS

- A. Building Wire: Single conductor, copper. Solid conductor for No. 10 AWG and smaller; stranded conductor for larger than No. 10 AWG.
 - 1. Thermoplastic Insulated Wire: Conform to NEMA WC 5.
 - 2. Cross-Linked, Polyethylene Insulated Wire: Conform to NEMA WC 7.
 - 3. Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated. Select to comply with Project's installation requirements.
- B. Channel and angle support systems, hangers, anchors, sleeves, brackets, fabricated items, and fasteners are designed to provide secure support from the building structure for electrical components.
 - 1. Material: Steel, except as otherwise indicated, protected from corrosion with zinc coating or with treatment of equivalent corrosion resistance using approved alternative finish or inherent material characteristics.
 - 2. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel, except as otherwise indicated.
- C. Steel channel supports have 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
 - 1. Fittings and accessories mate and match with channels and are from the same manufacturer.
- D. Nonmetallic Channel and Angle Systems: Structural-grade, factory-formed, fiberglass-resin channels and angles with 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
 - 1. Fittings and accessories mate and match with channels or angles and are from the

- same manufacturer.
2. Fitting and Accessory Material: Same as channels and angles, except metal items may be stainless steel.
- E. Sheer-Metal Sleeves: 0.0276-inch (0.7-mm) or heavier galvanized sheet steel, round tube, closed with welded longitudinal joint.
 - F. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
 - G. Expansion Anchors: Carbon-steel wedge or sleeve type.
 - H. Toggle Bolts: All-steel springhead type.
 - I. Powder-Driven Threaded Studs: Heat-treated steel.
 - J. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch wide (0.08 mm thick by 25 mm wide).
 - K. Underground Line Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape with the following features:
 1. Size: Not less than 4 mils thick by 6 inches wide (0.102 mm thick by 152 mm wide).
 - a. Compounded for permanent direct-burial service.
 2. Embedded continuous metallic strip or core.
 - a. Printed Legend: Indicates type of underground line.
 - L. Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
 - M. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
 - N. Interior Warning and Caution Signs: Preprinted, aluminum, baked-enamel finish signs, punched for fasteners, with colors, legend, and size appropriate to the application.
 - O. Exterior Warning and Caution Signs: Weather-resistant, nonfading, preprinted, cellulose acetate butyrate signs with 0.0396-inch (1-mm), galvanized steel backing, with colors, legend, and size appropriate to the application. 1/4-inch (6.4-mm) grommets in corners for mounting.
 - P. Fasteners for Metal Signs: Self-tapping stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.
 - Q. Meter Sockets: Comply with serving utility company requirements.

1.3 EXECUTION

- A. Install components and equipment to provide the maximum possible headroom where mounting heights or other location criteria are not indicated.
- B. Install items level, plumb, and parallel and perpendicular to other building systems and components, except where otherwise indicated.
- C. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- D. Give right of way to raceways and piping systems installed at a required slope.
- E. Feeders: Type THHN/THWN, copper conductor, in raceway, except as otherwise indicated.
- F. Branch Circuits: Type THHN/THWN, in raceway.
- G. Damp Locations and Outdoors Supports: Hot-dip galvanized materials or nonmetallic, U-channel system components.
- H. Dry Locations Supports: Steel materials.
- I. Support Clamps for PVC Raceways Supports: Click-type clamp system.
- J. Strength of Supports: Adequate to carry all present and future loads, times a safety factor of at least 4; 200-lb- (90-kg-) minimum design load.
- K. Install wires in raceway according to manufacturer's written instructions and NECA's "Standard of Installation."
- L. Conductor Splices: Keep to the minimum and comply with the following:
 - 1. Install splices and taps that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - 2. Use splice and tap connectors that are compatible with conductor material.
- M. Wiring at Outlets: Install with at least 12 inches (300 mm) of slack conductor at each outlet.
- N. Connect outlets and components to wiring systems and to ground as indicated and instructed by manufacturer. Tighten connectors and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening requirements specified in UL 486A.
- O. Install devices to securely and permanently fasten and support electrical components.

P. Raceway Supports: Comply with NFPA 70 and the following requirements:

1. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U bolts, clamps, attachments, and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
2. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
3. Spare Capacity: Size supports for multiple conduits so capacity can be increased by a 25 percent minimum in the future.
4. Support individual horizontal raceways with separate, malleable iron pipe hangers or clamps.
5. Hanger Rods: 1/4-inch (6-mm) diameter or larger threaded steel, except as otherwise indicated.
6. Spring Steel Fasteners: Specifically designed for supporting single conduits or tubing. May be used in lieu of malleable iron hangers for 1-1/2-inch (38-mm) and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to channel and slotted angle supports.
7. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports, with no weight load on raceway terminals.

Q. Vertical Conductor Supports: Install simultaneously with conductors.

R. Miscellaneous Supports: Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices except where components are mounted directly to structural features of adequate strength.

S. In open overhead spaces, cast boxes threaded to raceways need not be separately supported, except where used for fixture support; support sheet-metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches (610 mm) from the box.

T. Sleeves: Install for cable and raceway penetrations of concrete slabs and walls, except where core-drilled holes are used. Install for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.

U. Firestopping: Apply to cable and raceway penetrations of fire-rated floor and wall assemblies. Perform firestopping as specified in Division 7 Section "Firestopping" to reestablish the original fire-resistance rating of the assembly at the penetration.

V. Fastening: Unless otherwise indicated, securely fasten electrical items and their supporting hardware to the building structure. Perform fastening according to the following:

1. Fasten by means of wood screws or screw-type nails on wood; toggle bolts on hollow masonry units; concrete inserts or expansion bolts on concrete or solid masonry; and by machine screws, welded threaded studs, or spring-tension clamps on steel.

2. Threaded studs driven by a powder charge and provided with lock washers and nuts may be used instead of expansion bolts, machine screws, or wood screws.
 3. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or any other items.
 4. In partitions of light steel construction use sheet-metal screws.
 5. Drill holes in concrete beams so holes more than 1-1/2 inches (38 mm) deep do not cut main reinforcing bars.
 6. Drill holes in concrete so holes more than 3/4 inch (19 mm) deep do not cut main reinforcing bars.
 7. Fill and seal holes drilled in concrete and not used.
 8. Select fasteners so the load applied to any fastener does not exceed 25 percent of the proof-test load.
- W. Install concrete pads and bases according to requirements of Division 3 Section "Cast-in-Place Concrete."
- X. Install utility-metering equipment according to utility company's written requirements. Provide grounding and empty conduits as required by company.
- Y. Install identification devices where required.
1. Install labels where indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
 2. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated on the Contract Documents or required by codes and standards. Use consistent designations throughout the Project.
 3. Self-Adhesive Identification Products: Clean surfaces of dust, loose material, and oily films before applying.
 4. Tag or label power circuits for future connection and circuits in raceways and enclosures with other circuits. Identify source and circuit numbers in each cabinet, pull box, junction box, and outlet box. Color coding may be used for voltage and phase indication.
 5. Identify Paths of Underground Electrical Lines: During trench backfilling, for exterior underground power, control, signal, and communication lines, install continuous underground plastic line marker located directly above power and communication lines. Locate 6 to 8 inches (150 to 200 mm) below finished grade. Where multiple lines installed in a common trench or concrete envelope do not exceed an overall width of 16 inches (400 mm), use a single line marker.
 6. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.
- Z. Cutting and Patching: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for electrical installations. Perform cutting by skilled mechanics of the trades involved. Repair disturbed surfaces to match adjacent undisturbed surfaces.

END OF SECTION 16050

SECTION 16120 - CONDUCTORS AND CABLES

1.1 GENERAL

- A. Listing and Labeling: Provide wires and cables specified in this Section that are UL listed and labeled.

1.2 PRODUCTS

- A. Building Wires and Cables: UL-listed building wires and cables with conductor material, insulation type, cable construction, and rating as specified.
 - 1. Rubber Insulation Material: Comply with NEMA WC 3.
 - 2. Thermoplastic Insulation Material: Comply with NEMA WC 5.
 - 3. Cross-Linked Polyethylene Insulation Material: Comply with NEMA WC 7.
 - 4. Ethylene Propylene Rubber Insulation Material: Comply with NEMA WC 8.
 - 5. Conductor Material: Copper.
 - 6. Stranding: Solid conductor for No. 10 AWG and smaller; stranded conductor for larger than No. 10 AWG.
- B. Connectors and Splices: UL-listed, factory-fabricated wiring connectors of size, ampacity rating, material, type, and class for application and service indicated.

1.3 EXECUTION

- A. Use the following wires and insulation materials for the applications listed below:
 - 1. Service Entrance: Type RHW or THWN, in raceway.
 - 2. Feeders: Type THHN/THWN, in raceway.
 - 3. Branch Circuits: Type THHN/THWN, in raceway.
- B. Install wires and cables according to NECA's "Standard of Installation."
- C. Pull Conductors: Use manufacturer-approved pulling compound or lubricant where necessary. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means that will not damage cables or raceway.
- E. Install exposed cables, parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- F. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."

- G. Seal around cables penetrating fire-rated elements according to Division 7 Section "Firestopping."
- H. Identify wires and cables according to Division 16 Section "Basic Electrical Materials and Methods."
- I. Conductor Splices: Keep to minimum.
- J. Use splice and tap connectors compatible with conductor material.
- K. Use oxide inhibitor in each splice and tap connector for aluminum conductors.
- L. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches (300 mm) of slack.
- M. Connect outlets and components to wiring and to ground.

END OF SECTION 16120

SECTION 16130 - RACEWAYS AND BOXES

1.1 GENERAL

- A. Submittals: Product Data for surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Listing and Labeling: Provide raceways and boxes specified in this Section that are UL listed and labeled.
- C. Comply with NECA's "Standard of Installation."
- D. Comply with NFPA 70.

1.2 PRODUCTS

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. EMT and Fittings: ANSI C80.3, with set-screw or compression type fittings.
- D. LFMC: Flexible steel conduit with PVC jacket.
- E. Fittings: NEMA FB 1; compatible with conduit/tubing materials.
- F. RNC: NEMA TC 2, Schedule 40 or 80 PVC.
- G. Sheet Metal Boxes: NEMA OS 1.
- H. Cast-Metal Boxes: NEMA FB 1, Type FD, cast box with gasketed cover.
- I. Nonmetallic Boxes: NEMA OS 2.
- J. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- K. Cast-Metal Pull and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- L. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous hinge cover and flush latch.
- M. Cabinets: NEMA 250, Type 1, galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel. Hinged door in front cover with flush latch and concealed hinge. Key latch to match panelboards. Include metal barriers to separate wiring of different systems and voltage, and include

accessory feet where required for freestanding equipment.

1.3 EXECUTION

- A. Outdoors: Use the following wiring methods:
 - 1. Exposed: Rigid steel or IMC.
 - 2. Underground, Single Run: RNC.
 - 3. Underground, Grouped: RNC.
 - 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - 5. Boxes and Enclosures: NEMA 250, Type 3R or Type 4.
- B. Indoors: Use the following wiring methods:
 - 1. Exposed: EMT.
 - 2. Concealed: EMT.
 - 3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except in wet or damp locations, use LFMC.
 - 4. Damp or Wet Locations: Rigid steel conduit.
 - 5. Boxes and Enclosures: NEMA 250, Type 1; except use NEMA 250, Type 4, nonmetallic for damp or wet locations.
- C. Install raceways, boxes, enclosures, and cabinets as indicated, according to manufacturer's written instructions.
- D. Minimum Raceway Size: 3/4-inch trade size (DN16).
- E. Conceal conduit and EMT, unless otherwise indicated, within finished walls, ceilings, and floors.
- F. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- G. Install raceways level and square and at proper elevations. Provide adequate headroom.
- H. Complete raceway installation before starting conductor installation.
- I. Support raceways as specified in Division 16 Section "Basic Electrical Materials and Methods."
- J. Use temporary closures to prevent foreign matter from entering raceways.
- K. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portion of bends is not visible above the finished slab.

- L. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.
- M. Use raceway fittings compatible with raceways and suitable for use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings, unless otherwise indicated.
- N. Run concealed raceways, with a minimum of bends, in the shortest practical distance considering the type of building construction and obstructions, unless otherwise indicated.
- O. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.
 - 1. Run parallel or banked raceways together, on common supports where practical.
 - 2. Make bends in parallel or banked runs from same centerline to make bends parallel. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.
- P. Join raceways with fittings designed and approved for the purpose and make joints tight.
 - 1. Make raceway terminations tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight.
 - 2. Use insulating bushings to protect conductors.
- Q. Tighten set screws of threadless fittings with suitable tools.
- R. Terminations: Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against the box. Where terminations are not secure with 1 locknut, use 2 locknuts: 1 inside and 1 outside the box.
- S. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align raceways so the coupling is square to the box and tighten the chase nipple so no threads are exposed.
- T. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of the pull wire.
- U. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment. Install with an adjustable top or coupling threaded inside for plugs set flush with the finished floor. Extend conductors to equipment with rigid steel conduit; FMC may be used 6 inches (150 mm) above the floor. Install screwdriver-operated, threaded flush plugs flush with floor for future equipment connections.
- V. Flexible Connections: Use maximum of 6 feet (1830 mm) of flexible conduit for recessed and semirecessed lighting fixtures; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquidtight flexible conduit in wet or damp locations.

Install separate ground conductor across flexible connections.

- W. Do not install aluminum conduits embedded in or in contact with concrete.
- X. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.
- Y. Install hinged-cover enclosures and cabinets plumb. Support at each corner.
- Z. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure coatings, finishes, and cabinets are without damage or deterioration at the time of Substantial Completion.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - 2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.
- AA. On completion of installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finish, including chips, scratches, and abrasions.

END OF SECTION 16130

SECTION 16140 - WIRING DEVICES

1.1 GENERAL

- A. Submittals: Submit product data according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Comply with NFPA 70 "National Electrical Code" for devices and installation.
- C. Listing and Labeling: Provide products that are listed and labeled for their applications and installation conditions and for the environments in which installed.
 - 1. The Terms "Listed" and "Labeled": As defined in the "National Electrical Code," Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

1.2 PRODUCTS

- A. Wiring Devices: Comply with NEMA Standard WD 1, "General Purpose Wiring Devices."
 - 1. Enclosures: NEMA 1 equivalent, except as otherwise indicated.
 - 2. Color: White except as otherwise indicated or required by Code.
- B. Snap Switches: Quiet-type a.c. switches, NRTL listed and labeled as complying with UL Standard 20 "General Use Snap Switches," and with Federal Specification W-S-896.
 - 1. Switch: 20 ampere, 120-277 V a.c.
 - 2. Receptacle: NEMA configuration 5-15R.
- C. Wall Plates: Single and combination types that mate and match with corresponding wiring devices. Features include the following:
 - 1. Color: Matches wiring device except as otherwise indicated.
 - 2. Plate-Securing Screws: Metal with heads colored to match plate finish.
 - 3. Material for Finished Spaces: Steel with wrinkled finish, white baked enamel, suitable for field painting, except as otherwise indicated.
 - 4. Material for Unfinished Spaces: Galvanized steel.

1.3 EXECUTION

- A. Install devices and assemblies plumb and secure.
- B. Install wall plates when painting is complete.

- C. Arrangement of Devices: Except as otherwise indicated, mount flush, with long dimension vertical, and grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
- D. Protect devices and assemblies during painting.
- E. Switches: Where 3 or more switches are ganged, and elsewhere where indicated, identify each switch with approved legend engraved on wall plate.
- F. Receptacles: Identify the panelboard and circuit number from which served. Use machine-printed, pressure-sensitive, abrasion-resistant label tape on face of plate and durable wire markers or tags within outlet boxes.

END OF SECTION 16140

SECTION 16452 - GROUNDING

1.1 GENERAL

- A. Submittals: Submit Product Data for grounding rods, connectors and connection materials, and grounding fittings according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Comply with NFPA 70.
- C. Comply with UL 467.
- D. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

1.2 PRODUCTS

- A. Grounding and Bonding Products: Where types, sizes, ratings, and quantities indicated are in excess of National Electrical Code (NEC) requirements, the more stringent requirements and the greater size, rating, and quantity indications govern.
- B. Wire and Cable Grounding Conductors: Comply with Division 16 Section "Wires and Cables." Conform to NEC Table 8, except as otherwise indicated, for conductor properties, including stranding.
 - 1. Material: Copper.
 - 2. Equipment Grounding Conductors: Insulated with green color insulation.
 - 3. Grounding-Electrode Conductors: Stranded cable.
 - 4. Underground Conductors: Bare, tinned, stranded, except as otherwise indicated.
 - 5. Bare Copper Conductors: Conform to the following:
 - a. Solid Conductors: ASTM B 3.
 - b. Assembly of Stranded Conductors: ASTM B 8.
 - c. Tinned Conductors: ASTM B 33.
- C. Grounding Bus: Bare, annealed-copper bars of rectangular cross section.
- D. Braided Bonding Jumpers: Copper tape, braided No. 30 AWG bare copper wire, terminated with copper ferrules.
- E. Bonding Straps: Soft copper, 0.05 inch (1 mm) thick and 2 inches (50 mm) wide, except

as indicated.

- F. Pressure Connectors: High-conductivity-plated units.
- G. Bolted Clamps: Heavy-duty type.
- H. Exothermic-Welded Connections: Provided in kit form and selected per manufacturer's written instructions for specific types, sizes, and combinations of conductors and connected items.
- I. Grounding Rods: Copper-clad steel.
- J. Grounding Rods: Sectional type; copper-clad steel.
 - 1. Size: 3/4 inch by 120 inches (19 by 3000 mm).
- K. Test Wells: Fabricate from 15-inch- (400-mm-) long, square-cut sections of 8-inch- (200-mm-) diameter, Schedule 80, PVC pipe.

1.3 EXECUTION

- A. Equipment Grounding Conductors: Comply with NEC Article 250 for types, sizes, and quantities of equipment grounding conductors, except where specific types, larger sizes, or more conductors than required by NEC are indicated.
 - 1. Install equipment grounding conductor with circuit conductors for the items below in addition to those required by Code:
 - a. Feeders and branch circuits.
 - b. Lighting circuits.
 - c. Receptacle circuits.
 - d. Single-phase motor or appliance branch circuits.
 - e. Three-phase motor or appliance branch circuits.
 - f. Flexible raceway runs.
 - g. Armored and metal-clad cable runs.
- B. Metal Poles Supporting Outdoor Lighting Fixtures: Ground pole to a grounding electrode in addition to separate equipment grounding conductor run with supply branch circuit.
- C. Installation: Ground electrical systems and equipment according to NEC requirements, except where Drawings or Specifications exceed NEC requirements.
 - 1. Grounding Rods: Locate a minimum of 1-rod length from each other and at least the same distance from any other grounding electrode.
 - a. Drive until tops are 2 inches (50 mm) below finished floor or final grade, except as otherwise indicated.

- b. Interconnect with grounding-electrode conductors. Use exothermic welds, except at test wells and as otherwise indicated. Make these connections without damaging copper coating or exposing steel.
2. Metal Water Service Pipe: Provide insulated copper grounding conductors, sized as indicated, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes by grounding-clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Do not install a grounding jumper across dielectric fittings. Bond grounding-conductor conduit to conductor at each end.
3. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with grounding-clamp connectors.
4. Test Wells: One for each driven grounding electrode, except as otherwise indicated. Set top of well flush with finished grade or floor. Fill with 1-inch- (25-mm-) maximum-size crushed stone or gravel.

END OF SECTION 16452

SECTION 16460 - TRANSFORMERS

1.1 GENERAL

- A. Submittals: Submit product data and wiring diagrams according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Test Reports: Certified copies of manufacturer's design and routine factory tests required by the referenced standards.
- C. Sound Level Test Reports: Certified copies of manufacturer's sound level tests applicable to equipment for this Project.
- D. Comply with NFPA 70 "National Electrical Code."
- E. Comply with IEEE C2 "National Electrical Safety Code."
- F. Listing and Labeling: Products are listed and labeled.
 - 1. The Terms "Listed" and "Labeled": As defined in the "National Electrical Code," Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

1.2 PRODUCTS

- A. General-Purpose, Dry-Type Transformers: Comply with NEMA Standard ST 20 "Dry-Type Transformers for General Applications."
 - 1. Transformers: Two-winding type, 3-phase units using 1 coil per phase in primary and secondary.
 - 2. Windings: All copper.
 - 3. Low Sound Level Units: Minimum of 3 dBA less than NEMA ST 20 standard sound levels when factory tested according to IEEE Standard C57.12.91, "Test Code for Dry-Type Distribution and Power Transformers."
 - 4. Enclosure: Indoor, ventilated.
 - 5. Insulation Class: 220 deg C
 - a. Insulation Temperature Rise: 150 deg C.
 - 6. Taps: Full capacity taps in high-voltage winding are as follows:
 - 7. 15 kVA through 500 kVA: Six 2.5-percent taps, 2 above and 4 below rated high voltage.

1.3 EXECUTION

- A. Arrange equipment to provide adequate spacing for access and for cooling air circulation.
- B. Identify transformers and install warning signs according to Division 16 Section "Electrical Identification."
- C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not furnished, use those specified in UL 486A and UL 486B.
- D. Ground transformers and systems served by transformers according to Division 16 Section "Grounding."

END OF SECTION 16460

SECTION 16470 - PANELBOARDS

1.1 GENERAL

- A. Submittals: Product Data for each type of panelboard, accessory item, and component specified.
- B. Listing and Labeling: Provide products specified in this Section that are UL listed and labeled.
- C. Comply with NFPA 70.
- D. Comply with NEMA PB 1.

1.2 PRODUCTS

- A. Panelboard Enclosures: Flush- or surface-mounted cabinets as indicated. NEMA PB 1, Type 1, unless otherwise indicated to meet environmental conditions at installed location.
- B. Panelboard Front: Secured to box with concealed trim clamps, unless otherwise indicated. Front for surface-mounted panelboards shall be same dimensions as box. Fronts for flush panelboards shall overlap box, unless otherwise indicated.
- C. Directory Frame: Metal, mounted inside each panelboard door.
- D. Bus: Hard drawn copper of 98 percent conductivity.
- E. Main and Neutral Lugs: Compression type.
- F. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors. Bonded to box.
- G. Service Equipment Approval: Listed for use as service equipment for panelboards with main service disconnect switch.
- H. Lighting and Appliance Branch-Circuit Panelboards: Features include the following:
 - 1. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
 - 2. Doors: In panelboard front, with concealed hinges. Secure with flush catch and tumbler lock, all keyed alike.
- I. Distribution Panelboards: Features include the following:
 - 1. Doors: In panelboard front, except omit in fusible-switch panelboard, unless

otherwise indicated. Secure door with vault-type latch with numbler lock, all keyed alike.

2. Branch-Circuit Breakers: Where overcurrent protective devices are indicated to be circuit breakers, use bolt-on circuit breakers, except circuit breakers 225-A frame size and greater may be plug-in type where individual positive-locking device requires mechanical release for removal.

J. Molded-Case Circuit Breaker: NEMA AB 1, handle lockable.

1. Characteristics: Frame size, trip rating, number of poles, and auxiliary devices as indicated and interrupting capacity rating to meet available fault current.
2. Application Listing: Appropriate for application, including Type SWD for switching fluorescent lighting loads and Type HACR for heating, air-conditioning, and refrigerating equipment.
3. Circuit Breakers, 200 A and Larger: Trip units interchangeable within frame size.
4. Circuit Breakers, 400 A and Larger: Field-adjustable short-time and continuous current settings.
5. Lugs: Mechanical lugs and power-distribution connectors for number, size, and material of conductors indicated.

1.3 EXECUTION

- A. Install panelboards and accessory items according to NEMA PB 1.1.
- B. Mounting Heights: Top of trim 74 inches (1880 mm) above finished floor, unless otherwise indicated.
- C. Mounting: Plumb and rigid without distortion of box. Mount flush panelboards uniformly flush with wall finish.
- D. Circuit Directory: Type directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing.
- E. Install filler plates in unused spaces.
- F. Provision for Future Circuits at Flush Panelboards: Stub four 1-inch (27-GRC) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch (27-GRC) empty conduits into raised floor space or below slab not on grade.
- G. Wiring in Panelboard Gutters: Arrange conductors into groups, and bundle and wrap with wire ties after completing load balancing.
- H. Identify field-installed wiring and components and provide warning signs as specified in Division 16 Section "Basic Electrical Materials and Methods."
- I. Panelboard Nameplates: Label each panelboard with engraved laminated-plastic or metal

nameplates mounted with corrosion-resistant screws.

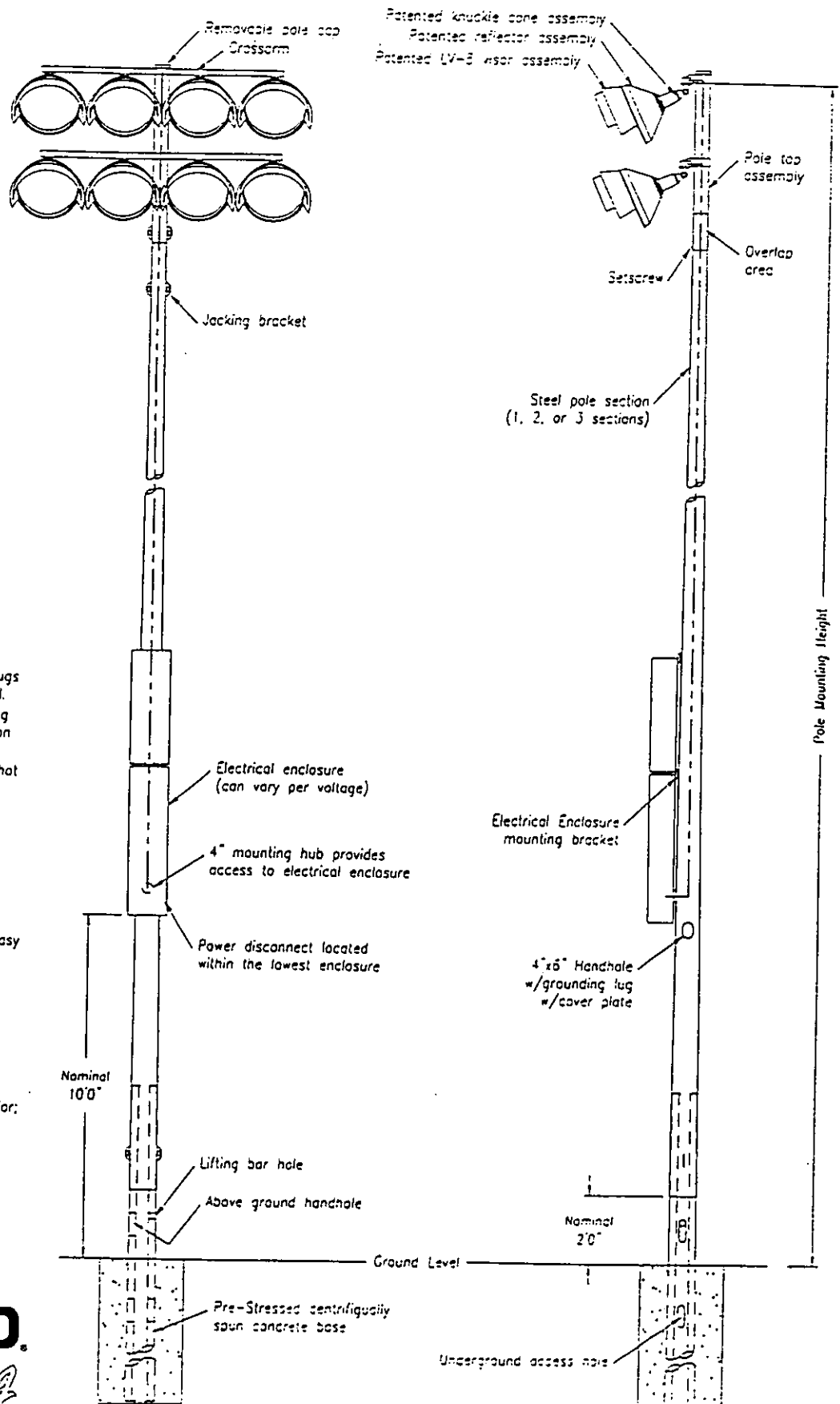
- J. Make equipment grounding connections for panelboards as indicated.
- K. Provide ground continuity to main electrical ground bus as indicated.
- L. Tighten electrical connectors and terminals, including grounding connections, according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- M. Field Quality Control: Perform acceptance tests as follows:
 - 1. Make insulation-resistance tests of each panelboard bus, component, and connecting supply, feeder, and control circuits.
 - 2. Make continuity tests of each circuit.
 - 3. Procedures: Perform each visual and mechanical inspection and electrical test stated in NETA ATS, Section 7.5 for switches and Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
- N. Adjusting: Set field-adjustable switches and circuit-breaker trip ranges as indicated.

END OF SECTION 16470

APPENDIX NO. 2

LIGHT POLE INSTALLATION DETAILS

Light Structure with 8 Fixtures



FEATURES:

- *Pre-constructed wire harness with kellum grips and quick connect plugs for ease of connection in the field. (Harnesses wrapped in mylar casing and a protective sleeve for abrasion resistance.)
- *All steel crossarms and poles are hot dipped galvanized.
- *All electrical enclosures are powder coated aluminum.
- *All threaded fasteners, hinges, and latches are stainless steel.
- *Pole top assembly w/factory wiring and aiming (complete welded assembly).
- *Jacking bracket design allows for easy use of "Come-A-Longs" for installation.
- *Included with each project are:
Base installation wedges
One offset installation level
One installation lifting rod

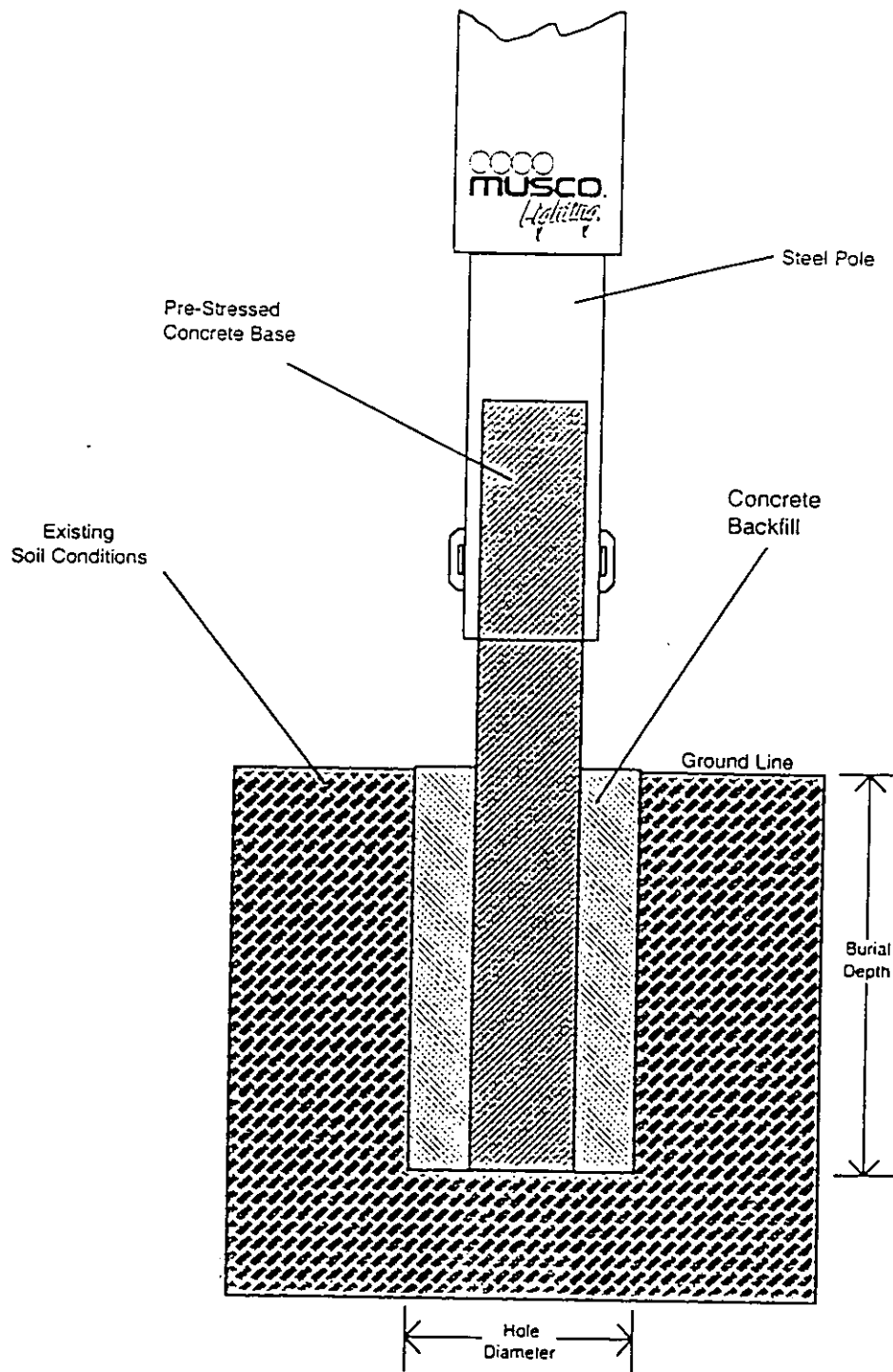
OPTIONAL FEATURES:

- *Additional couplings and handholes for:
Speakers
Security Lights
Other attachments

MUSCO
Lighting

Veterans Memorial Soccer Fields	
Representative: Dan Shaltoo	Project #: 54164252
	

(Drawing not to scale)



NOTE:

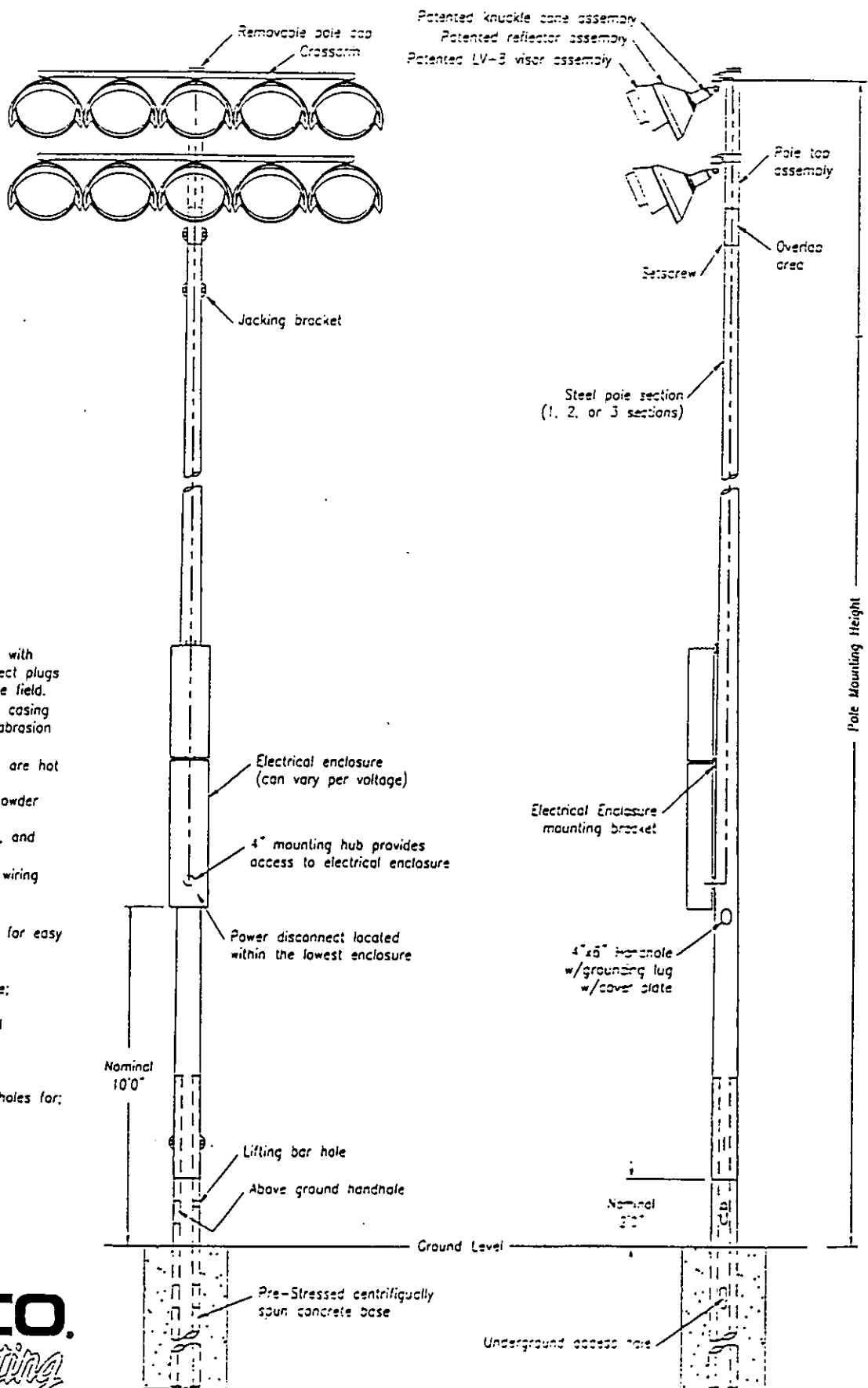
Foundation design based on assumed soil conditions of Class 5 Material per UBC 1997 Edition, Volume 2, Chapter 18, Division 1, Section 1806.8, Table 18-1-A.

Concrete backfill must have a minimum compressive strength of 3000 psi after 28 days.

Pole Location	# Fixtures per Pole	Base Weight	Hole Diameter	Backfill Quantity	Burial Depth	Dressed Pole Weight*
P1	8	3810	30"	1.5yds	14'	2352
P2	8	3810	30"	1.5yds	14'	2352

*Weight of steel pole and fixtures.

Light Structure with 10 Fixtures



FEATURES:

- *Pre-constructed wire harness with kellum grips and quick connect plugs for ease of connection in the field. (Harnesses wrapped in mylar casing and a protective sleeve for abrasion resistance.)
- *All steel crossarms and poles are hot dipped galvanized.
- *All electrical enclosures are powder coated aluminum.
- *All threaded fasteners, hinges, and latches are stainless steel.
- *Pole top assembly w/factory wiring and aiming (complete welded assembly).
- *Jacking bracket design allows for easy use of "Come-A-Longs" for installation.
- *Included with each project are:
 - Base installation wedges
 - One offset installation level
 - One installation lifting rod

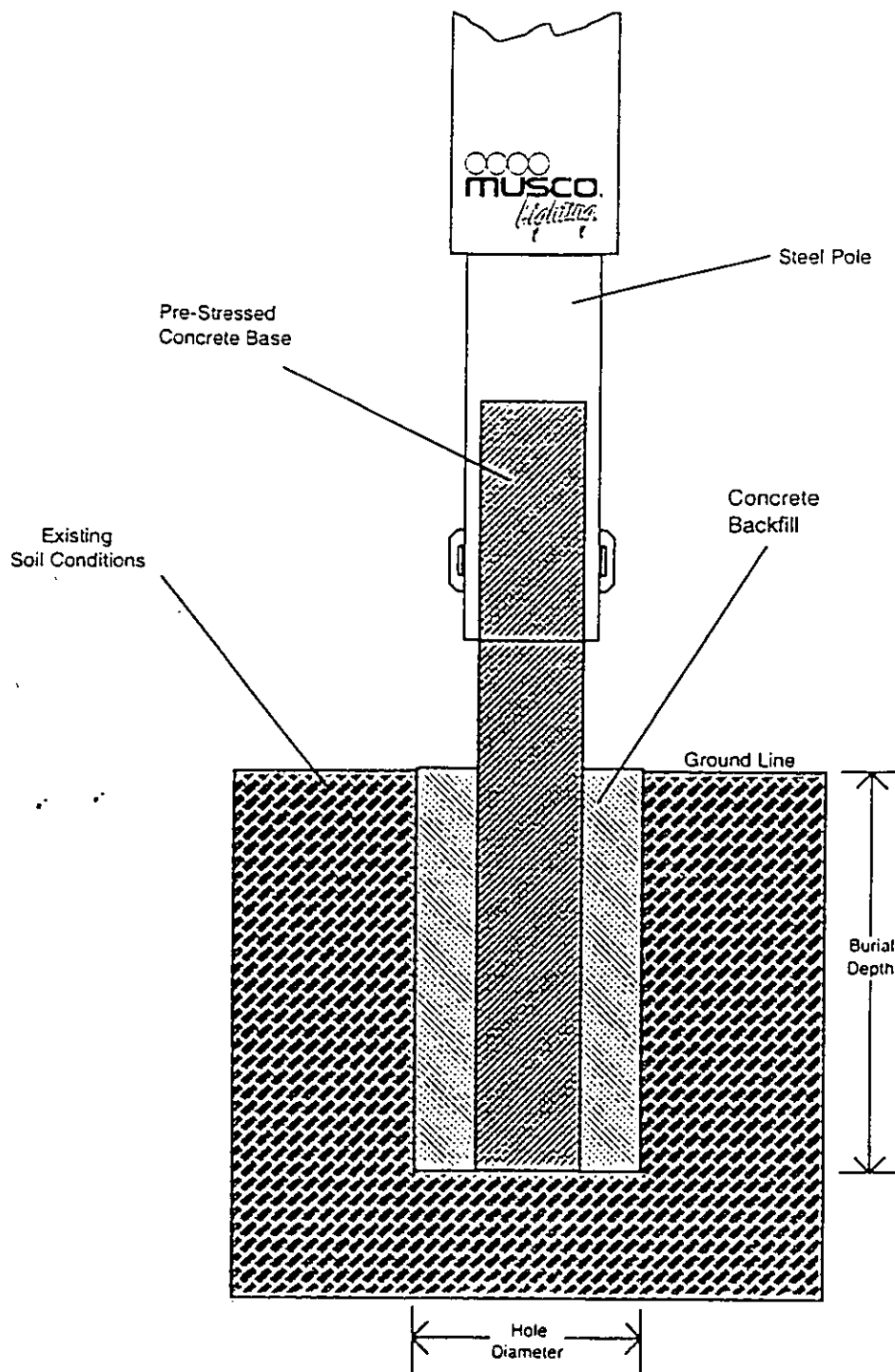
OPTIONAL FEATURES:

- *Additional couplings and handholes for:
 - Speakers
 - Security Lights
 - Other attachments

MUSCO.
Lighting

Drum Point Rd Rec Area	
Representative: Dan Snaloo	Project #: 54063197
	

(Drawing not to scale)



NOTE:

Foundation design based on assumed soil conditions of Class 5 Material per UBC 1997 Edition, Volume 2, Chapter 18, Division 1, Section 1806.8, Table 18-1-A.

Concrete backfill must have a minimum compressive strength of 3000 psi after 28 days.

Pole Location	# Fixtures per Pole	Base Weight	Hole Diameter	Backfill Quantity	Burial Depth	Dressed Pole Weight*
S5	10	3810	30"	1.8yds	14'	2502

* Weight of steel pole and fixtures.

RESOLUTION

WHEREAS, Sealed bids were received by the Division of Purchasing and Contracting of the Township of Brick for Proposed Site Lighting, Various Locations on May 18, 2001; and

WHEREAS, the bids have been reviewed by the Municipal Engineer; and

WHEREAS, the Municipal Engineer has recommended the award of said bid to the lowest responsible and responsive bidder.

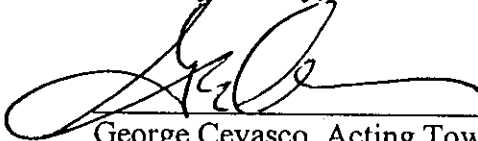
NOW, THEREFORE, BE IT RESOLVED BY THE TOWNSHIP COUNCIL OF THE TOWNSHIP OF BRICK, COUNTY OF OCEAN AND STATE OF NEW JERSEY, as follows:

1. That the bid for Proposed Site Lighting, Various Locations is hereby awarded to Lucas Electric Company, 1381 Route 130, Windsor, NJ 08561 for Base Bid (\$18,400.00), Alternate A1 (\$43,500.00), Alternate A2 (\$44,800.00), Alternate A4 (\$39,292.50) for a total amount of \$145,992.50.
2. A Certificate of Availability of Funds has been issued by the Chief Financial Officer and is attached hereto.
3. That the Mayor is authorized to execute and the Clerk to attest to the proposed form of contract, which shall be available for public examination in the office of the Township Clerk during normal business hours.
4. That the Division of Purchasing and Contracting is hereby authorized to return any and all bid securities submitted by any unsuccessful bidders pursuant to N.J.S.A. 40A:11-24 (a).
5. That the Township Clerk shall further forward a certified copy of this resolution to the Purchasing Agent, the Business Administrator, the Chief Financial Officer and the Municipal Engineer.

CERTIFICATION

I, George Cevasco, Acting Clerk of the Township of Brick in the County of Ocean and State of New Jersey, do certify that the foregoing resolution was duly passed by the Township Council of the Township of Brick at a regular meeting of said Council on the 22nd day of May, 2001.

IN WITNESS, WHEREOF, I have hereunto set my hand and seal of this Township this 22nd day of May, 2001.



George Cevasco, Acting Township Clerk

Agenda #	Date
4-3	5/22/01
Agenda #	Date
Agenda #	Date
Agenda #	Date