ABBREVIATIONS

Ø	DIAMETER	
و لا	CENTER LINE POUND or NUMBER - A -	ga. Galv. G.C.
A.B. A/C A.C. A.C.T.	ANCHOR BOLT AIR CONDITIONING ASPHALTIC CONCRETE ACOUSTICAL CEILING TILE	g.i. GND. GR. GYP. E
A.F.F. A.F.G. ALT. A.S.T.M.	ABOVE FINISH FLOOR ABOVE FINISH GRADE ALTERNATE AMERICAN SOCIETY FOR TESTING & MATERIALS	H.B. H.C. HDR. HDW. HR.
BLDG. BOT. B.O. B.O.A.	BUILDING BOTTOM BOTTOM OF BACK OF HOUSE	HI. H.M. HOR. HTG. HVAC
C.B. CJ. CLG. CLR. C.M.U.	CATCH BASIN CONTROL JOINT CEILING CLEAR CONCRETE MASONRY	H.W. I.E. INSUL. INT.
C/O COL. COMM. CONC. CONT.	CLEANOUT COLUMN COMMUNICATION CONCRETE CONTINUOUS	LAM. LAV. LBS. L.L.
CONTR. C.W.	CONTRACTOR COLD WATER	MAX. MDF.
DEPT. DTL. D.F. DIA. DIM. DN. D.S. DWG.	- D - DEPARTMENT DETAIL DRINKING FOUNTAIN DIAMETER DIMENSION DOWN DOWN SPOUT DRAWING	MECH MTL. MFR. M.H. MIN. MIN. MISC. MTD. M.O. MUL.
(E) EA. EIFS	EXISTING EACH EXTERIOR INSULATION	(N) N.I.C.
ELEC. ENCL. E.J.	ELECTRICAL ENCLOSURE EXPANSION JOINT	N.R. N.T.S.
eq. Equip. Exist. Ext.	EQUAL EQUIPMENT EXISTING EXTERIOR	o.c. o.d. opp.
F.D. F.F. FIN. FLUOR.	- F - FLOOR DRAIN FINISH FLOOR FINISH FLUORESCENT FACE OF	P.L. Plbg. Plwd. P.O.C. P.S.I.
F.R.F.	FIBERGLASS REINFORCED PANEL	P.T.
F.S. Ft. Ftg. Furr.	FLOOR SINK FOOT/FEET FOOTING FURRING	r. (r) rad. r.d.

GA. GALV. G.C. G.I. GND. GR. GYP. BD.	- G - GAUGE GALVANIZED GENERAL CONTRACTOR GALVANIZED IRON GROUND GROUND GRADE GYPSUM BOARD
H.B. H.C. HDR. HDW. HR. HT. H.M. HOR. HTG. HVAC	- H - HOSE BIBB HOLLOW CORE HEADER HARDWARE HOUR HEIGHT HOLLOW METAL HORIZONTAL HEATING HEATING VENTILATION & AIR CONDITIONING HOT WATER
i.e. Insul. Int.	INVERT ELEVATION INSULATION INTERIOR
lam. Lav. Lbs. L.l.	- L- LAMINATED LAVATORY POUNDS LANDLORD
MAX. MDF.	- M - MAXIMUM MEDIUM DENSITY FIBERBOARD
MECH. MTL. MFR. M.H. MIN. MIN. MISC. MTD. M.O. MUL.	MECHANICAL METAL MANUFACTURER MAN HOLE MINIMUM MISCELLANEOUS MOUNTED MASONRY OPENING MULION
(N) N.I.C. NO. N.R. N.T.S.	NEW NOT IN CONTRACT NUMBER NON RATED NOT TO SCALE
o.c. o.d. opp.	ON CENTER OUTSIDE DIMENSION OPPOSITE
P.L. Plbg. PlWD. P.O.C. P.S.I. P.T.	- P - PROPERTY LINE PLUMBING PLYWOOD POINT OF CURVATURE POUNDS PER SQUARE INCH PRESSURE TREATED - R -
R. (R) RAD. R.D.	RISER RELOCATED RADIUS ROOF DRAIN

RE: REFERENCE REFR. REFRIGERATED REINF. REINFORCED REINF. REINFORCED REQ'D. REQUIRED RM. ROOM R.O. ROUGH OPENING R.O.W. RIGHT OF WAY RCP REFLECTED CEILING PLAN PLAN -S-S.C. SOLID CORE SCHED. SCHEDULE SCHED. SCHEDULE SECT. SECTION SHT. SHEET SIM. SIMILAR SPEC. SPECIFICATION SO. SOUARE S.S. STAINLESS STEEL STD. STANDARD TON STOR. STORAGE STD. STANDARD NG STRUCT. STRUCTURAL S.O.V. SHUT OFF VALVE SUSP. SUSPENDED -T-PLAN - T -TREAD Т. TEL. TELEPHONE TEMP. TEMPERATURE T & G TONGUE & GROOVE T.O. TOP OF TYP. TYPICAL - U -U.N.O. UNLESS NOTED U.L. UNDERWRITERS LABORATORY -V-VERT. VERTICAL V.C.T. VINYL COMPOSITE TILE V.T.R. VENT THROUGH ROOF V.I.F. VERIFY IN FIELD - W --W-W/ WITH W.C. WATER CLOSET WD. WOOD W.H. WATER HEATER W/O WITHOUT W.W.F. WELDED WIRE FABRIC

SHEET NUMBER-THIS SIGNIFIES DETAIL -IS ON SAME SHEET ELEVATION REFERENCE -SHEET NUMBER-

SUB-ELEVATION LETTER -— A ELEVATION REFERENCE - $D \begin{pmatrix} X \\ X \end{pmatrix} B$ SHEET NUMBER-PLAN DETAIL REFERENCE -----·/ X ` SHEET NUMBER-X SECTION REFERENCE ----- \mathbf{X} SHEET NUMBER-----X SHEET NUMBER-X ELEVATION HEIGHT -0'-0" A.F.F. -ELEVATION LOCATION LAYOUT STARTPOINT -۲

ANNOTATION SYMBOL LEG PLAN DETAIL REFERENCE ______X

L

X /

DOOR NUMBER -

WALL TYPE ------KEYNOTE ------

EQUIPMENT CALLO

REVISION NUMBER ROOM NAME ----

ROOM NUMBER -

COLUMN GRID LIN

FINISH CALLOUT -

Ceiling Height -CEILING FINISH CAL

VICINITY MAP





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	CODE ANALYSIS BUILDING SUMMARY BUILDING CODES CONSTRUCTION TYPE: VB LSC. 2015 DEDTION ANSI (2009) EDITION LIPC. 2019) EDITION LIPC. 2019) EDITION LIPC. 2019 EDITION SUILDING AREA 13-4" (TOP OF PARAPET) LIPC. 2019 EDITION LIPC. 2019 EDITION LIPC. 2019 EDITION NUMBER OF STORIES: 1 LIPC. 2019 EDITION NUMBER OF STORIES: 1 LIPC. 2019 EDITION NUMBER OF STORIES: 1 LIPC. 2019 EDITION OCCUPANCY GROUPS: M (RETAU) LIPC. 2019 EDITION	PROJECT INFORMATION APNISI 071010213165 PANNING ZONE CTAISORMERCIAL CORRIDOR- CTAISORMERCIAL	SHEET SHEET NAME REVISION ARCHITECTURAL ARCHITECTURAL ARCHITECTURAL A00.00 COVER SHEET ARCHITECTURAL ARCHITECTURAL A01.00 COVER SHEET ARCHITECTURAL ARCHITECTURAL A01.10 REFERENCES THE PAN ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS A01.10 ENLARGED SITE PAN ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS 5 TOTAL ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS S1.0 GENERAL NOTES ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS 2 TOTAL STRUCTURAL SHEETS ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS 3 TOTAL ELECTRICAL SHEETS ARCHITECTURAL SHEETS ARCHITECTURAL SHEETS	MADISON, WI 53716 GREKLING
	SCOPE OF WORK	PROJECT DIRECTORY	1	
Sone y Oak In Galders 5 Saura D Are Way Good Mark Way Goodd Mark Way Good Mark Way Goodd Mark Way Good Mark Way Good	 DEMOUTION REMOVAL OF DESIGNATED EXISTING PARKING STRIPE PAINT. EXCAVATION AT EXISTING MEDIAN FOR NEW SLAB CONSTRUCTION. REMOVE/RELOCATE EXISTING LANDSCAPE PER NEW CONSTRUCTION. CORE AND EXCAVATE FOR NEW BOLLARDS AT EXISTING PARKING SPACES. TRENCH/BORE FOR ELECTRICAL AND TELCOM. TIE-IN CONSTRUCTION RUN CONDUIT & CABLE FOR ELECTRICAL AND TELCOM. TIE-IN FORM & POUR NEW STRUCTURAL CONCRETE PAD INSTALL NEW STRE SECURITY LIGHT POST FIXTURE INSTALL NEW STRE SECURITY LIGHT POST FIXTURE INSTALL NEW ANK ATM KIOSK PAINT NEW PARKING STRIPING AND SYMBOL(S) INSTALL NEW BOLLARDS AS APPLICABLE 	OWNER U.S. BANK 1 S. PINCKNEY ST. MADISON, WI 53703-2802 CONTACT: BYRON L BUTLER, ASSISTANT VICE PRESIDENT PHONE: 608,252,4083 EWAIL: ARCHITECT KEN MCCRACKEN, ARCHITECT 1101 CENTRAL EXPRESSWAY S, SUITE 100 ALLEN, TX 75013 CONTACT: MKE BRIGGS PHONE: 972,201,9317 EWAIL: mbriggs@pmdginc.com ELECTRICAL THORSON BAKER AND ASSOCIATES 525 METRO PLACE NORTH, SUITE 175 COLUMBUS, OH 43017 CONTACT: RVAN WAGNER PHONE: 234,400.0177 EWAIL: RWAGNER@THORSONBAKER.com STRUCTURAL THORSON BAKER AND ASSOCIATES 525 METRO PLACE NORTH, SUITE 175 COLUMBUS, OH 43017 CONTACT: RYAN WAGNER PHONE: 234,400.0177 EWAIL: RWAGNER@THORSONBAKER.com		In the second se



ACCESSIBLE BXING SPACES ACCESSIBLE PARKING SPACE NOTES: ING NUMBER MINIMUM INCHES VIDE MINIMUM, SHALL BE 96 INCHES WIDE MINIMUM AND VAN PARKING SPACES SHALL BE 132 INCHES VIDE MINIMUM, SHALL BE 96 INCHES WIDE MINIMUM. SPACES 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	PARKING SURFACE PARKING SURFACE PARKING SURFACE PARKING SURFACE PARKING SIGN SIGNAGE AND IDENTIFICATION OF SPACE NOTES: 1. PARKING SPACE IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILTY COMPLYING WITH SECTION 703.6.3.1. 2. SIGN DENTIFIYICA VARIANCE SHALL CONTAIN ADDITIONAL LANGUAGE OR AN ADDITIONAL SIGN WITH THE DESIGNATION VARIA ACCESSIBLE 3. SIGNS SHALE BE GIVEN FOR THE SIGN. 3. SIGNS SHALE DE GIVEN SHALL DECORTON OF THE SIGN. 3. SIGNS SHALE DE GIVEN SHALL DECORTON OF THE SIGN. ACCEESSIBLE PARKING SIGNS N.T.S. SIGNS SHALE DE GIVEN SIGNNS N.T.S. SIGNS SHALE DE GIVEN SIGNNS N.T.S. SIGNS SHALE SIGN SIGNS N.T.S. SIGNS SHALE SIGN SIGNS N.T.S. SIGNS SHALE SIGNS N.T.S.	<section-header><text><text><text><text><text><text></text></text></text></text></text></text></section-header>
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	2. NEW / PROPOSE 5/A01.50) STRUCTURAL SLAB, ATM KIOSK, AND ASSOCIATED	Equipment, Ref. Detail	19120 SE	34TH STREET	ung
	3. EXISTING SITE PA	rking Curb/edge. All existing curbs to remai	N, UNO		'ER, WA 98683	
	4. EXISTING PARKING 5. REMOVE EXISTIN	g space stripe to remain g parking space striping		EMAIL: mbrig	972.201.9317 Jgs@pmdginc.com	
	6. NEW PARKING SF	ACE STRIPING TO MATCH EXISTING				
	7. EXISTING LANDS	TAPE ELEMENT TO REMAIN		KEN MCCRAC	cken, architec	т
	9. NEW/RELOCATED) LANDSCAPE ELEMENT, COORD. FINAL INSTALL LC	OCATION WITH OWNER	SEAL:		
				1115C		
	11. EXISTING SITE LIG PROPOSED WOR MODIFICATION A	HT POST AND FIXTURE LOCATION TO BE EVALUATE K. NOTIFY ARCHITECT IF CONFLICT OCCURS IMMEL S REQ.	D FOR CONFLICT WITH DIATELY FOR DESIGN	KEN	INETH J.	
	12. EXISTING SITE SIG	NAGE TO REMAIN		A-10)661-005 AMAS	
	 13. NEW BOLLARD A 14. EXISTING PAD MO 	t existing parking space, ref. 5/A01.50 Dunt transformer, verify all requirements a	ND ROUTING WITH		HITE	
	POWER COMPAN POWER COMPAN	IY PRIOR TO ROUGHIN OF ANY CONDUIT. E.C. TO IY IF ADDITIONAL TRANSFORMER IS REQUIRED. REF) COORDINATE WITH . E1.0	08 /	25 /21	
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	KEYNOTES		- 3	Ľ,	\bigcirc	
	4706 COTTAGE GRO	<u>/E RD.</u>			Z	
	SITE AREA: 27 PAVED AREA: 15,	474 SQ FT 845 SQ FT				
	BUILDING AREA: 2,0 BUILDING AREA: 8,9 BUILDING USE: OF	989 SQ FT 140 SQ FT FICE				
					N O S	10
	PARKING ANALYSIS					\mathbb{M}
140.	EXISTING PARKING SP/ REMOVED SPACES:	CES: 53 (2 HANDICAP)				
	TOTAL PARKING:	44			TAC	\mathbf{i}
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		DESIGN SHALL CONFORM TO MGO STANDARDS, A	S SET IN SECTION 10.06(6)		Ř4.	\geq
			-	REV DATE DE (ô) 06.22.21 CTY	- PERMIT SUBMITTAL	_
			- <u> </u>	08.25.21 CON	ISTRUCTION SET	
		AREA OF WORK				
		PROPERTY LINE LOCATION				
		EXISTING LANDSCAPE				
	(2) Jo	NEW / RELOCATED LANDSCAPE		DRAWN BY:		ТН
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		EXISTING STELIGHT POLE AND FIXTURE		ICN2	1008.0	
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/NED MORTAR	1. THESE GENERAL NOTES SHALL APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED.	KEN MCCRACKEN,
STRONG GRADE STEEL	2. THE WORK INDICATED IN THESE DRAWINGS SHALL CONFORM TO ALL CODES AND STANDARDS THAT HAVE JURISDICTION OVER THIS PROJECT.	Architecture - Program Management - Permitting
de Bollard Cover in , uno by City Req.	3. THE CONTRACTOR SHALL SECURE AND MAINTAIN ALL JOB RELATED PERMITS AND LICENSES AND PAY ALL RELATED FEES.	SUITE 115 VANCOUVER, WA 98683
R BOLLARD ATT. DETAIL	4. ALL REQUIREMENTS AND REGULATIONS PERTAINING TO HANDICAPPED ACCESSIBILITY AND OSHA MUST BE INCORPORATED INTO THE WORK EVEN THOUGH THEY MAY NOT BE LISTED INDIVIDUALLY OR SEPARATELY IN THE DRAWINGS.	PROJECT CONTACT: MIKE BRIGGS PHONE: 972.201.9317 EMAIL: mbriggs@pmdginc.com
	5. THE APPROVAL OF PLANS DOES NOT PERMIT THE VIOLATION OF ANY SECTION OF THE BUILDING CODE OR CITY ORDINANCES, STATE OR FEDERAL LAW.	
	6. GENERAL CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF WRITTEN SUBSTANTIAL COMPLETION.	KEN MCCRACKEN, ARCHITECT
	7. THE GENERAL CONTRACTOR WARRANTS TO THE OWNER AND TO THE ARCHITECT THAT ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THE CONTRACT ARE NEW UNLESS OTHERWISE SPECIFIED.	
FOOTING	8. MATERIAL AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH RECOMMENDED MANUFACTURER'S PRINTED INSTRUCTIONS AND SHALL COMPLY WITH LOCAL BUILDING CODE.	KENNETH J. MCCRACKEN
REINFORCEMENT D TO PIPE	 THE GENERAL CONTRACTOR SHALL PERSONALLY SUPERVISE AND DIRECT THE WORK. THE GENERAL CONTRACTOR IS RESPOSIBLE FOR ALL CONSTRUCTION AND/OR INSTALLATION METHODS, MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATION OF ALL PORTIONS OF THE WORK. 	A-10661-005 CAMAS WA
3/4" = 1'-0"	10. UNLESS NOTED OTHERWISE, THE GENERAL CONTRACTOR SHALL PROVIDE AND PAY ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY, TRANSPORTATION, PERMITS AND OTHER SERVICES AND FACILITIES NECESSARY FOR PROPER AND TIMELY EXECUTION OF THE WORK.	08/25/21
· · · · · · · · · · · · · · · · · · ·	 ABSOLUTELY NO SUBSTITUTIONS WILL BE ALLOWED, UNLESS APPROVED BY THE ARCHITECT IN WRITING. 	
" CONDUIT FOR	12. NO INFORMATION OR DETAILS IN THE DRAWINGS OF THIS PROJECT MAY BE USED WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.	
UTURE COMMUNICATION WIRING. CAP END DF CONDUIT 12" BELOW SURFACE ND 6" OUTSIDE NEW SLAB	13. ALL CONSULTANT'S DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CROSS CHECK WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING OR INSTALLATION OF ANY MECHANICAL, PLUMBING, AND ELECTRICAL WORK. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEERS DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR IMMEDIATE CLARIFICATION.	
	14. THE CONTRACTOR SHALL ESTABLISH BENCHMARKS AND VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO SUBMISSION OF BIDS. CONTRACTOR IS TO COMPARE ARCHITECTURAL DRAWINGS WITH MECHANICAL AND ELECTRICAL DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. EXISTING CONDITIONS DISCOVERED TO BE IN CONFLICT WITH AND REQUIRING REVISION TO IMPROVEMENT DESIGN DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT AND OWNER CONSTRUCTION PROJECT MANAGER. NO INFORMATION OR DETAILS IN THE DRAWINGS OF THIS PROJECT MAY BE USED WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.	
	 DIMENSIONS SHOWN ARE TO FINISH FACE, COLUMN GRID AND FACE OF CONCRETE, UNLESS OTHERWISE NOTED. 	
	16. UNLESS OTHERWISE SHOWN OR NOTED, ALL DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS AND SHALL BE USED WHERE APPLICABLE. THE CONTRACTOR SHALL REFER TO GENERAL NOTES AS DESCRIBED ON EACH DRAWING SHEET AND INCORPORATE AS A PART OF THE WORK.	
	17. SHOP DRAWINGS ARE MEANT TO COMPLIMENT AND CLARIFY THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL REVIEW SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT. HOWEVER, THE ARCHITECT'S REVIEW AND APPROVAL DOES NOT RELIEVE CONTRACTOR OF HIS RESPONSIBILITY TO VERIFY CONFORMANCE WITH CONSTRUCTION DOCUMENTS. WHEN DISCREPANCIES ARE FOUND BETWEEN SHOP DRAWINGS AND CONSTRUCTION DOCUMENTS, NOTIFY THE ARCHITECT AND HAVE THE SHOP REVISE DRAWINGS PRIOR TO SUBMITTAL. SHOP DRAWING LITERATURE SHALL BE SUBMITTED FOR ALL STEEL FABRICATIONS, MILLWORK, DOORS AND HARDWARE, PAINT, CEILING TILES, PLUMBING FIXTURES AND FITTINGS, HVAC EQUIPMENT AND CONTROLS, AND ELECTRICAL FIXTURES AND GEAR.	BING CENT
E DURING STRUCTION. REPLACE ING LANDSCAPING IN , AND ANY IRRIGATION	18. ALL TRADES SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS AND RUBBISH CAUSED BY THEIR WORK. AT THE COMPLETION OF THE WORK, REMOVE ALL RUBBISH, TOOLS, SCAFFOLDING, SURPLUS MATERIALS AND LEAVE THE JOB IN A BROOM CLEAN CONDITION.	
FACTION OF AHJ	 PROVIDE A CONSTRUCTION FENCE OR CANOPY AT PUBLIC RIGHT-OF-WAY FOR PEDESTRIAN PROTECTION IF ANY WORK IS TO BE PERFORMED ON ANY BUILDING OR STRUCTURE ADJACENT TO PUBLIC RIGHT-OF-WAY. 	
	20. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, TRANSPORTATION, TOOLS, UTILITIES, AND OTHER SERVICES NECESSARY FOR PROPER EXECUTION OF THE CONSTRUCTION DOCUMENTS IN A TIMELY MANNER.	
	21. THE GENERAL CONTRACTOR SHALL INCLUDE IN THE BID ALL TRENCHING, PATCHING AND REPAIRING REQUIRED FOR THE JOB. INCLUDING (BUT NOT LIMITED TO) STRUCTURAL ITEMS, ELECTRICAL AND PLUMBING LINES, FIXTURES AND SITE WORK.	
	22. SAFETY MEASURES: AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF THE PERSONS AND PROPERTY AND FOR ALL INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.	DISOCIAL R
¥	23. CONSTRUCTION WORK SHALL NOT BLOCK MEANS OF EGRESS.	N L N L A
	24. COTTING AND PATCHING: WHERE EXISTING CONDITIONS ARE COT OR DISTORBED TO PERMIT INSTALLATION OF NEW WORK, MATCH AND PATCH EXISTING DISTURBED CONSTRUCTION OR FINISH.	REV DATE DESCRIPTION
	25. ELECTRICAL, WATER & GAS SERVICES SHALL BE METERED DIRECTLY BY THE SERVING UTILITY COMPANY.	Ô 06.22.21 CTY - PERMIT SUBMITTAL Ô 08.25.21 CONSTRUCTION SET
	26. DIMENSIONS ARE NOT TO BE SCALED FROM DRAWINGS EXCEPT WHERE SPECIFICALLY APPROVED IN THESE DOCUMENTS.	
	 G.C. TO ENSURE MIN. 5'-0" x 5'-0" GROUND AREA ADJACENT TO KIOSK LOCATION, DOES NOT EXCEED 2% SLOPE IN ANY DIRECTION, TO MEET ACCESSIBILITY COMPLIANCE. 	
		ILINZ I UUU.U Sheet name:
		CONSTRUCTION PLAN & SITE DETAILS
NORTH		SHEET NUMBER:
1/4" = 1'-0"	GENERAL NOTES1	A01.50

GENERAL NOTES & SPECIFICATIONS

Des	sign Criteria	
Appli	cable Building Code: 2015 IBC	
1.	Design live loads	
	A Electroste	
	a. Slab on grade	=100 psf
	B. Roof loads	
	a. Minimum roof snow or live load dictated by Building Official	= 30 psf
	 b. Minimum roof live load by code c. Ground snow load 	= 20 psf
	 Snow exposure factor (Ce) Snow importance factor (Is) Thermal Factor (Ct) 	= 1.00 = 1.00 = 1.00
	d. Flat roof snow load (Pf)	= 30 psf
	e. Total design snow load	= 30 psf
	f. Roof design is governed by the minimum roof live load or	total design.
2.	Design wind loads	
	 A. Basic wind speed (3 second gust) (Ultimate) a. Exposure b. Risk Category c. Height (qz) d. Gust Effect (G) e. Force coefficients (Cf) f. Wind force on ATM 	= 115 mph = C = II = 6.6ft = 0.85 = 1.36 =130 pounds
3.	Seismic	
	$\begin{array}{llllllllllllllllllllllllllllllllllll$	
	Seismic importance factor (le)1.00Risk CategoryIISeismic site classDSeismic design categoryB	
4.	Frost depth = 48"	

General

- 1. The term General Contractor (G.C.) as used in these documents refers to the Contractor / Construction Manager in responsible charge of the project in terms of coordination, scheduling, subcontractor coordination, etc. This term refers to, but is not limited to, General Contractor, Construction Manager, Design Build Contractor, Prime Contractor, etc. The term is referencing the entity that coordinates the work of other trades.
- All referenced standards, such as codes, specifications, and other publications noted herein, are intended to refer to the edition of said standard as referenced by the applicable building code or the latest edition published as of the date on the contract documents.
- 3. The structure is designed to be self-supporting and stable after the building is fully completed. It is solely the contractor's responsibility to determine erection procedure and sequence and insure the safety of the construction personnel, public, building and its component parts, and adjacent buildings and properties. This includes the addition of whatever temporary or permanent shoring, etc. that may be necessary to brace new construction and adjacent buildings, so that the structure is braced for wind, seismic, gravity, construction loads, etc. and so that no horizontal or vertical settlement or any damage occurs to the adjacent existing structures. Temporary supports shall be maintained in place until permanent supports and/or shoring and bracing are installed. Design of these supports shall be by an engineer registered in the state where the project is located in the employ of the contractor.
- 4. It is the contractors' responsibility to enforce all applicable safety codes and regulations during all phases of construction.
- The contractor shall perform all construction for the project in a manner and sequence that are based on accepted industry standards that recognize the interaction of the components that comprise the structure, without causing distress, unanticipated movements or irregular load paths as a result of the construction means and methods employed.
- Construction loads shall not exceed design live loads. The contractor shall be responsible for all design required to support construction equipment used in constructing this project. Shoring and re-shoring is the responsibility of the contractor.
- 7. Details labeled "Typical Details" on drawings apply to situations occurring on the project that are the same or similar to those specifically detailed. Such details apply whether or not details are referenced at each location. Notify engineer for clarifications regarding applicability of "Typical Details".
- 8. Do not scale drawings.
- 9. Any discrepancies between structural and architectural drawings shall be brought to the attention of the architect and structural engineer.
- 10. Should any of the general notes conflict with any details or instructions on plans, or in the specifications, the strictest provision shall govern.
- 11. Shop drawings and submittals:
 - A. These drawings shall be checked and coordinated with other materials and contracts by the general contractor and shop drawings and submittals shall bear the contractor's review stamp with the checker's initials before being submitted to the architect for approval.

Building Pad Preparation

- 1. All building pad preparation shall follow the recommendations of the geotechnical report (uno).
- 2. If unstable subgrade sectors cannot be stabilized by excavation and recompaction, then crushed stone or similar coarse aggregate materials shall be rolled into the subgrade until a firm subgrade reaction is achieved.
- 3. The geotechnical engineer shall determine on site or off site imported material that can be used for engineered fill. All fill material shall be approved by the geotechnical engineer.
- 4. The proposed engineered fill materials are to be placed in lifts not exceeding eight (8) inches in loose measured thickness. Each lift is to be compacted as follows:
- A. Slab on grade: Minimum of 95% maximum density by ASTM D698. Footings bearing on fill: Minimum of 98% maximum density by ASTM D698.

В. Foundation

- Foundation design is based upon an assumed bearing pressure of 1500 psf on firm undisturbed soil. A Geotechnical engineer shall be retained by the owner to field verify that the existing soils yield an allowable bearing pressure equal to or greater than the assumed value. The structural engineer shall be notified immediately if any discrepancies are discovered between field conditions and those presented herein.
- Inundation and long term exposure of bearing surfaces, which will result in deterioration of bearing formations, shall be prevented. Footings shall be placed immediately following footing excavations and bearing surface inspection.
- 3. All fill materials shall be free of organic contaminations and other deleterious matter.

1.	All concrete cor and ACI 306.1 u
2.	All detailing, fab 318, "Building C
3.	Concrete produ
4.	Ready-mixed Conneeded for isola
5.	
	Type of Concre
	Concrete p exposed to or vulneral or freeze th
	Notes:
	A. All cemer acceptabl
	B. Minimum ash per N
	C. Fly Ash is cementitie
	D. Slag cem
	the water the same
	E. All admix designed from the s
	F. All concre water red contain th
	G. All concrete mid-range
	H. Calcium of permitted
6.	Normal weight a
7.	Air-entraining a
8.	Water-reducing
9.	Curing Compou requirements of check of covera
10.	Moisture-retaining waterproof pape
11.	Bond Breaker F
12.	All pipe sleeve of
13.	All aluminum in approved by the
14.	Measure, batch, concrete with sy the project site v only through the
15.	The placement of plumbing trades details in the str
16.	Reinforcing stee should be place
17.	Reinforcing bars be permitted.
18.	Reinforcement s
19.	Where continuo necessary splice development tal otherwise noted
20.	Cold weather pl
21.	Hot weather pla
<u>Minim</u> 1.	um Lap Splice a 4000 psi norma
	Bar Size #6
2.	" 'Top Bars' as no than 12 inches o

<u>Concrete</u>

nstruction shall conform to ACI 301, "Specifications for Structural Concrete", ACI 305.1 unless noted otherwise.

brication and placing of reinforcing bars, unless otherwise noted, shall conform to ACI Code Requirements for Structural Concrete", ACI 117, and the ACI Detailing Manual.

uction: General as per ACI 301, Section 4, Article 4.3, except as noted.

Concrete: Use for all work, except that when small quantities (not over 1/2 cubic yard) are lated or relatively unimportant items.

	Conc	rete Typ	es Schedu	ule		
rete	Minimum cementious content (lb/cu. yd)	Maximum water/ cement ratio (by weight)	Specified 28-day compressive strength (psi)	Specified slump range for placement with W.R. (inches)	Specified air content range (% by volume)	Maximum size aggregate (inches)
permanently to the weather able to de-icers thaw cycles	564	0.45	4500	5-6	6 ±1.5%	1

ent shall be Type I or Type III Portland Cement per ASTM C150. Types IA and IP are not ble. Use one brand of cement throughout project. cementitious content shall consist of 100% cement or a combination of cement and fly

Note C, or a combination of cement and slag cement per Note D. Fly Ash shall not be combination with slag cement as a substitute for cement. s permitted and shall conform to ASTM C618 Type C or F, but shall not exceed 20% of ious content by weight indicated above on a substitution basis and shall be included in r-to-cement ratio. If fly ash is used, the mix design submittals shall have tests using the nount of fly ash. The contractor's schedule shall account for the use of fly ash.

nent is permitted and shall conform to ASTM C989, but shall not exceed 15% of ious content by weight indicated above on a substitution basis and shall be included in r-to-cement ratio. If slag cement is used, the mix design submittals shall have tests using amount of slag cement. The contractor's schedule shall account for the use of slag

ctures other than superplasticizers shall be added at the batch plant. Superplasticizers, d for addition to the mix at the plant, may be added at the batch plant with verifications structural engineer and verifications that the water-to-cement ratio has not been . Superplasticizers added at the site shall be sent in pre-measured containers from the

rete used for cast-in-place concrete slabs shall contain the specified water reducing or ducing/retarding admixture. All concrete slabs, placed at air temperature below 50°F shall he specified non-corrosive, non-chloride accelerator. All concrete placed at air ature above 80° shall contain specified water-reducing/retarder admixture. All concrete to be air-entrained shall contain an approved air-entraining admixture. All pumped shall contain the specified high-range water-reducing admixture. Concrete with a

ement ratio above 0.40 to 0.60 shall contain the specified water reducer. rete requiring a high slump for placement (e.g. pumping, drilled piers, etc.) shall contain ge and high-range superplasticizer. Increased slump may not be achieved by exceeding

ified maximum water cement ratio. Maximum slump is 8 inches with use of water admixture (ASTM C494). chloride shall not be permitted nor shall any admixture containing calcium chloride be

aggregate: ASTM C33, from a single source.

admixture: ASTM C260.

admixture: ASTM C494, Type A, containing not more than 0.1% chloride ions.

und: Liquid membrane-forming type (sodium silicate type not approved) meeting all ASTM C309, Type 1-D clear or translucent, having a fugitive dye to facilitate visual age. Use of Type 2 white pigmented type is recommended during hot weather.

ing sheet materials: Any of the types listed in and meeting requirements of ASTM C171: per, 4 mil. (.004") polyethylene film, white burlap/polyethylene sheet.

Felt: 15# felt.

openings through concrete slabs shall be formed with standard steel pipe.

contact with concrete or dissimilar metals shall be coated with two coats coal tar epoxy, e architect, unless otherwise noted.

, mix and deliver concrete according to ASTM C94/C94M (ASTM C1116/C1116M for ynthetic or steel fiber) and furnish batch ticket information. Addition of water to the mix at will not be permitted. All water must be added at the batch plant. Slump may be adjusted e use of additional water reducing admixture or high range water reducing admixture.

of sleeves, outlet boxes, box-outs, anchors, etc., for the mechanical, electrical and s is the responsibility of the trade involved; however, any box-outs not covered by typical tructural drawings shall be submitted for approval.

el shop drawings shall indicate the sequence in which layers of crossing reinforcing ed in order to produce the correct outermost layers as indicated on the drawings.

rs shall conform to ASTM A615, Grade 60. No tack welding of reinforcing in the field will

shall be continuous through all construction joints unless otherwise noted on drawings.

ous bars are called for, they shall run continuously around corners and be lapped at ces, or hooked at discontinuous ends. Lap lengths shall be as given in the splice and able. Lap beam top bars at mid-span and beam bottom bars at supports, unless

placing: Comply with ACI 306.1.

acing: Comply with ACI 305.1.

and Anchorage Dimension Table

weight concrete, Fy=grade 60, non-coated bars

Top Bars Other Bars Lap Anchorage Bar Size Lap

Anchorage 37" #6 oted in the tables indicates the condition where horizontal bars are so placed that more

s of fresh concrete is cast below the splice.

<u>Concrete</u> (cont.)

Minimum Concrete Cover for Reinforcing

1. Unless noted otherwise, concrete reinforcing shall be placed with proper cover to provide protection in accordance with ACI 318, and within deviation tolerances listed in ACI 117.

Location	Minimum Cover
Footings and grade beams cast against and permanently exposed to earth	3"
Slabs on grade (W.W.R) & slabs on composite deck (W.W.R.)	1/3 slab thickness from top of slab

Curing

- 1. Curing compound shall be provided as prescribed on architectural drawings based on floor use. Coordinate for compatibility of finish material.
- 2. Moisture-retaining sheet material meeting ASTM C171 may be used.
- 3. Maintain initial curing for 12 hours after finishing, 24 hours for air temperature of 75 degrees F and above.

Submittals

- 1. Product data: Submit data for proprietary materials and items including admixtures, patching compounds, waterstops, joint systems, curing compounds, finish materials, and others as requested by architect/engineer.
- 2. Mix design: Submit mix designs for each concrete mix for the project per Chapter 5 of ACI 318. Mix designs shall include all back up material with compressive strength breaks based on field experience or breaks from a trial mix per Chapter 5.

Post-Installed Anchors and Reinforcing Dowels

- 1. Design of anchors, adhesives, and embedments specified on the drawings is based on Hilti products. Any substitutions shall meet or exceed the allowable shear and allowable tension values published in the Hilti North American Product Technical Guide.
- 2. The contractor shall submit ICC ES Evaluation reports and manufacturer installation instructions for all post-installed anchors being used on the project.
- The contractor shall ensure the installers of post-installed anchors shall have at least three (3) years of 3. experience installing anchors in similar installations. If installers do not have the required experience with similar installations they must conduct a thorough training with the manufacturer's representative. Training shall consist of but not be limited to, proper hole drilling procedures, hole preparation and cleaning techniques, adhesive injection techniques and dispenser training / maintenance, rebar dowel preparation and installation and proof loading/torquing.
- 4. The contractor shall provide manufacturer product information for any requests for substitution for review to the EOR for compliance with the contract documents.
- 5. The contractor shall submit the specific product information, for each application, for any product requesting substitution. For each application being substituted, provide anchor type, embedment depth, adhesive type, edge distances, etc.; along with the allowable shear and tension capacity for the requested applications. Do not provide generic product data; only specific values for each substitution will be reviewed. If this information is not fully provided, the submittal will be immediately rejected.
- 6. Post-installed anchors and dowels shall be used only where specifically indicated on the drawings or for specific conditions approved by the engineer. Items indicated to be cast-in-place shall not be substituted with post-installed methods or products unless prior approval is given by the engineer. When requesting a substitution of a post-installed anchor in lieu of cast-in-place anchor, calculations, for a post installed alternate, shall be provided by an engineer registered in the appropriate jurisdiction of the project.
- 7. Fastener and anchor material shall be as follows: Bolts and Studs: ASTM A307; ASTM A449 (where indicated as 'High Strength')
 - Carbon and Alloy Steel Nuts: ASTM A563
 - Carbon Steel Washers: ASTM F436 • Carbon Steel Threaded Rod: ASTM F1554, GR.36
 - Wedge Anchors: ASTM A510 or ASTM A108
 - Stainless Steel Bolts, Hex Cap Screws, and Studs: ASTM F593
 - Stainless Steel Nuts: ASTM F594 • Zinc Plating: ASTM B633
 - Hot-Dip Galvanizing: ASTM A153
 - Reinforcing Dowels: ASTM A615

The following anchors shall only be used where indicated on the drawings, unless specifically noted otherwise in sections or details in the drawings:

CONCRETE ANCHORS (CRACKED AND UNCRACKED CONCRETE)		
ANCHOR TYPE	ADHESIVE TYPE	ROD TYPE
Adhesive	Hilti HIT-HY200 SafeSet System	Hilti HIT-Z Rod
Mechanical	-	Hilti KWIK HUS-EZ
Mechanical	-	Hilti KWIK Bolt-TZ Mechanical Safe-Set with AT tool

Special Inspections

1. Special inspection is to be provided in addition to the inspections conducted by the department of building safety and shall not be construed to relieve the owner or his authorized agent from requesting the periodic and called inspections required by the applicable building code. Special inspection shall be paid by the owner

2. In addition to the regular inspections, the following items will also require special inspection in accordance with the applicable building code.

A. Soils compliance prior to foundation inspection (compacting fill, special grading) B. Structural concrete over 2,500 psi

3. Special inspector shall meet the qualifications as stated in the applicable building code and shall perform the duties and responsibilities as outlined in the applicable building code.

ABBREVIATIONS

А.В	_ANCHOR BOLT
A.R	ANCHOR ROD
ADD'L	ADDITIONAL
A.F.F.	ABOVE FINISH FLOOR
ARCH.	ARCHITECTURAL
B/	 BOTTOM OF
BLDG.	
BM.	BEAM
вот <u>.</u>	BOTTOM
BRG.	BEARING
BT.I	BOI TED TIE JOIST
CANT'I	
	COLD FORMED METAL FRAMIN
CIP	CAST-IN-PLACE
CI	
CI	
U.Y	
DET	
DIAG	
Ø / DIA	_DIAMETER
D.L	_DEAD LOAD
DWG	_DRAWING
E.F	_EACH FACE
EJ	_EXPANSION JOINT
EL	_ELEVATION
EMBED	_EMBEDMENT
E.S	_EACH SIDE
EQ	_EQUAL OR EQUIVALENT
EQUIP	_EQUIPMENT
E.W	EACH WAY
EXP.	EXPANSION
(E)	EXISTING
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FIN.	
FLG.	
FLR	
F.S.	FAR SIDE OR FOOTING STEP
FT.	FEET
FTG.	FOOTING
GA.	GAUGE
GB	GRADE BEAM
	GENERAL CONTRACTOR
GALV	GALVANIZED
UALV	

ח'ח	HEADED
HORIZ	
I F	
k	
LO	
L.L. (IIH)	
(IN)	
(N.I.C.)	
N.S	
NIS	
0.0	
0.F	
0/0	
0PP	
PJ	
PL	
PSF	_POUNDS/SQUARE FOOT
	POUNDS/SQUARE INCH
RAD	
R.D	_ROOF DRAIN
REINF.	
REQ'D	
SECT	SECTION
SIM	_SIMILAR TO
S.O.G.	_SLAB ON GRADE
SP	_SPACES
SQ	_SQUARE
STIFF.	
STL	STEEL
STRUCT.	STRUCTURAL
S.W	_SHORT WAY
SYM	_SYMMETRICAL
T/	_TOP OF
ТҮР	_TYPICAL
	UNLESS NOTED OTHERWISE
VERT	_VERTICAL
V.I.F	_VERIFY IN FIELD
W.P	_WORK POINT
W.W.R	_WELDED WIRE REINFORCEMENT
W/	_WITH





10"

, _L3 3/4" _L3 3/4" _L

- 1

┼€⊖)

TYPICAL BASE PLATE DETAIL

1 1/4"

1 1/4"



TYPICAL ANCHOR ROD DETAIL (ASTM F1554 GR. 36)

- CONTRACTOR MAY USE LEVELING NUTS OR LEVELING PLATES AT CONTRACTORS OPTION.
- AN INCREASE IN GROUT THICKNESS FOR LARGE BASE PLATES IS PERMISSIBLE IF APPROVED BY THE ENGINEER. COORDINATION DUE TO INCREASE IN GROUT THICKNESS FOR OTHER TRADES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- IN LIEU OF CAST-IN ANCHORS, POST-INSTALLED ANCHORS MAY BE USED WITH THE SAME EMBEDMENT, SEE POST-INSTALLED ANCHOR NOTES.















ELECTRICAL ABBREVIATIONS		GENERAL NOTES	E
Α	AMPS		
AIC			SYMBOL
ARCH.	ARCHITECTURAL	1. ALL DEVICES, EQUIPMENT, FIXTURES, & THE LIKE, MUST BE GROUNDED BY USE OF A	
AWG	AMERICAN WIRE GAGE	PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ ELECTRICAL BONDS OF THE	
С	CONDUIT	METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.	
CONTR	CONTRACTOR		
CU	COPPER	2. BRANCH CIRCUIT CONDUCTOR SIZES (& CONDUITS) SHALL BE INCREASED FROM THOSE	
20		INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS	
DWG	DRAWING	SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP	
(E) or EXIST.	EXISTING	BETWEEN THE PANEL & THE LOADS DO NOT EXCEED A LIMIT OF 3%.	/ - # ~ \
E.C.	ELECTRICAL CONTRACTOR		
-	EXHAUST FAN	3. REGARDLESS OF THE TEMPERATURE RATING OF THE CONDUCTOR INSULATION, ALL	D D
ELEC.	ELECTRICAL	CONDUCTOR AMPACITY KATINGS FOR THIS PROJECT SMALL BE DETERMINED FROM THE	Ŭ
EMT	ELECTRICAL METALLIC TUBING	75 C CONDUCTOR TEMPERATURE RATINGS INDICATED IN THE NECTABLES, WHERE EQUIDMENT OD DEVICES ARE DROVIDED WITH TERMINAL SILLIGS RATED FOR 50% THE	РВ
EOR	ENGINEER OF RECORD	AMPACITY RATING OF THE 75°C CONDUCTOR SHALL BE LIMITED TO ITS ASSOCIATED	
EQ.	EQUAL	60°C RATING AS INDICATED IN THE NEC TABLES. THE ELECTRICAL CONTRACTOR SHALL	ļ
ETR	EXISTING TO REMAIN	BE RESPONSIBLE TO INCREASE THE CONDUCTORS AND CONDUIT SIZE AS REQUIRED.	
FT.	FOOT/FEET		
G.C.		4. ALL 120V AND 277V BRANCH CIRCUITS SHALL BE PROVIDED WITH SEPARATE NEUTRAL	
GFI		CONDUCTORS. SHARED NEUTRALS WILL NOT BE PERMITTED FOR MULTI-CIRCUIT	
GND		INSTALLATIONS. WHERE MULTIPLE CIRCUITS ARE RUN IN A COMMON RACEWAY, THE	
JB		AMPACITY OF THE CONDUCTORS SHALL BE PROPERLY DERATED & CONDUIT SHALL BE	
KCMIL	ONE THOUSAND CIRCULAR MILS	SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN SIX (6) CURRENT	
KVA	KILOVOLT AMPERE	CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT. REFERENCE NEC ARTICLE AND	
KW	KILOWATT	TABLE 310.15(B)(3)(a).	
LTG	LIGHTING		
MAX	MAXIMUM	5. ALL CONDUITS SHALL CONTAIN A GROUND CONDUCTOR SIZED PER NEC TABLE #250.122.	
MCB	MAIN CIRCUIT BREAKER	DROP DERATING ETC.) THE GROUND CONDUCTOR SIZE FOR ANY REASON (I.E. VOLTAGE	
MIN		PROPORTIONATELY (ACCORDING TO CIRCULAR MIL AREA) FROM THE SIZE REQUIRED	
MLU	MAIN LUGS ONLY	BY NEC TABLE #250.122.	
NEC	NATIONAL ELECTRIC CODE		
NFPA	NATIONAL FIRE PROTECTION	6. ALL ELECTRICAL EQUIPMENT AND DEVICES FOR THIS PROJECT MUST BE UL LISTED.	
	ASSOCIATION	DEVICES, EQUIPMENT, SYSTEMS SHALL BE INSTALLED PER N.E.C. REQUIREMENTS AND	
NIC		MANUFACTURER'S INSTRUCTIONS.	
NTS Ø av DU	NOT TO SCALE		
P	FIRAGE POLE	7. ALL CONDUIT AND CABLING SHALL BE PROPERLY SUPPORTED AS REQUIRED BY THE	
PB			
PNL	PANEL	CONTRACTOR SHALL DE RESPONSIBLE TO REPLACE AND/OR REWORK EAD TING	
PVC		CONDULT AND/OR CADLING THAT IS NOT IN COMPLIANCE WITH THIS REQUIREMENT.	
		8 ELECTRICAL CONTRACTOR SHALL BACKELL ALL ELECTRICAL TRENCHES USING CLEAN	
		FILL MATERIAL FREE OF ORGANIC CONTAMINATIONS AND OTHER DELETERIOUS	
		MATTER. PLACE BACKFILL MATERIAL IN 8" THICK LAYERS WITH EACH LIFT COMPACTED	
V		AT NEAR OPTIMUM MOISTURE CONTENT. COMPACT LIFTS TO ACHIEVE A MINIMUM IN	
ŵ	WATTS	PLACE DENSITY OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698.	
WP	WEATHER-PROOF TYPE DEVICE		
	(NEMA 3R RATED)	9. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS,	
WR	WEATHER-RESISTANT TYPE DEVICE	UNDERGROUND UTILITIES, AND DRAINAGE PRIOR TO TRENCHING OR AUGERING FOR	
	(NEMA 3R RATED)	POLE BASE. (TYPICAL)	
X'FMR	TRANSFORMER		



ELECTRICAL SYMBOL LEGEND

DESCRIPTION

CONDUIT WITH WIRING RUN CONCEALED IN OR ABOVE CEILING OR WALL, OR RUN EXPOSED IN UNFINISHED AREAS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS (#12 AWG -MINIMUM). PROVIDE A CODE-SIZED GROUND WIRE IN ALL CONDUITS IN ADDITION TO THE CONDUCTORS SHOWN.

CONDUIT WITH WIRING RUN UNDERGROUND. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS (#12 AWG - MINIMUM). PROVIDE A CODE-SIZED GROUND WIRE IN ALL CONDUITS IN ADDITION TO THE CONDUCTORS SHOWN.

JUNCTION BOX - TYPE AND SIZE AS REQUIRED BY NEC

PULL BOX - TYPE AND SIZE AS REQUIRED BY NEC



<u>Notes:</u> 1. Support Post - USE any of the following:

A. 2-3" MIN. STEEL PIPE CAPPED AND CEMENTED IN GROUND
 B. 2-4" MIN. PVC SCHEDULE 80 CEMENT FILLED AND CEMENTED IN GROUND
 C. 2-3" MIN. CHANNEL IRON CEMENTED IN GROUND

2. MOUNTING HARDWARE - TWO 12 GAUGE 1-5/8" X 1-5/8" CONTINUOUS SLOT HOT DIPPED GALVANIZED CHANNEL (e.g. UNISTRUT) COMPLETE WITH 1-1/4" X 5/16" DIA. 13 THD SPRING NUT (2 PER CHANNEL), 5/16" HEX NUT, AND LOCK WASHER SECURELY MOUNTED TO SUPPORT POSTS.

3. CONDUIT SHALL BE RIGID GALVANIZED OR IMC STEEL, OR SCHEDULE 80 PVC (ELECTRICAL GRADE).

4. METER SOCKET MAY BE CONNECTED TO AN EXTERNAL GROUND ROD IF REQUIRED BY LOCAL INSPECTION AUTHORITIES.

METER AND DISTRIBUTION DETAIL



NOTE: NAMEPLATES ARE REQUIRED ON ALL SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, ENCLOSURES AND ELECTRICAL CABINETS, ACCESS DOORS/PANELS FOR CONCEALED ELECTRICAL EQUIPMENT, EMERGENCY SYSTEMS/BOXES, MOTOR CONTROL CENTERS, ENCLOSED SWITCHES/CIRCUIT BREAKERS/CONTROLLERS, POWER-TRANSFER DEVICES, PUSH-BUTTONS, CONTACTORS, LIGHTING CONTROL SYSTEMS, INVERTERS, GENERATORS, UPS, MONITORING EQUIPMENT, STARTERS, DISCONNECT SWITCHES, METER SOCKETS, RELAYS, TRANSFORMERS, AND JUNCTION BOXES GREATER THAN 4 11/16" SQUARE. ALSO PROVIDE NAMEPLATES ON BRANCH SWITCHES/BREAKERS OF SWITCHBOARDS AND DISTRIBUTION PANELS.

STANDARD COLORS:

 NORMAL POWER - WHITE BACKGROUND, BLACK LETTERS
 EMERGENCY POWER - RED BACKGROUND, WHITE LETTERING
 IN ADDITION TO THE FUNCTION NAMEPLATE, PROVIDE NAMEPLATES IDENTIFYING ALL "MAIN SERVICE NAMEPLATE DISCONNECTS" - RED BACKGROUND - WHITE LETTERING

NAMEPLATE DETAIL

ONE-LINE DIAGRAM NOTES

- 1. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL POWER COMPANY REQUIREMENTS PRIOR TO BIDDING & INCLUDE THE COST OF ALL ASSOCIATED LABOR, MATERIALS, & CHARGES IN HIS BID.
- 2. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY COMPANY PRIOR TO BIDDING AND PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT CALCULATIONS WITH SHOP DRAWING SUBMITTAL.
- 3. ALL BUSSING SHALL BE COPPER.
- 4. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
- 5. PROVIDE NAMEPLATES PER NAMEPLATE DETAIL.
- 6. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 7. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH NEC ARTICLE 110.16 FOR LABELING OF PANELS FOR ARC FLASH HAZARD WARNING AS WELL AS FOLLOWING REQUIRED SAFETY PRECAUTIONS WHEN SERVICING OR MAINTAINING ELECTRICAL EQUIPMENT.
- 8. ELECTRICAL CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTIONS FOR A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.
- 9. EXTERIOR MOUNTED ELECTRICAL EQUIPMENT SHALL BE NEMA 3R RATED AND BE FURNISHED WITH HEATERS, THERMOSTAT AND DISCONNECTING MEANS INTEGRAL TO EQUIPMENT.
- 10. GROUNDING ELECTRODE SYSTEM CONDUCTORS SHALL BE COPPER.
- 11. CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
- 12. FEEDER ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING OF FEEDERS (OVERHEAD OR UNDERGROUND) IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

	LOAD CENTER MLC	KEN MCCRACKEN, ARCHITECT
.AMACOID, 5/32" :CURE TO PANEL ER WITH ADHESIVE NER. EQUIPMENT DESIGNATION	120/208 VOLTS 3 PH. 4 WIRE SOLID NEUTRAL MOUNTING: FLUSH - 100 AMPERE BUS 100 AMPERE MAIN MCB SURFACE X SPECIAL REQUIREMENTS	Architecture • Program Management • Permitting 19120 SE 34TH STREET SUITE 115 VANCOUVER, WA 98683 PROJECT CONTACT: MIKE BRIGGS PHONE: 972.201.9317 EMAIL: mbriggs@pmdginc.com
 ■ EQUIPMENT DESIGNATION OF SOURCE SUPPLYING THE DISCONNECT MEANS (AS APPLICABLE) ION 'S, ACCESS (GENCY' R DEVICES, VERTERS, NNECT CTION ATES ON JTION G :PLATES : '' - RED ▲ LL 	INDICATES BREAKER TO HAVE LOCK-ON CLIP. 1 11 10 INDICATES BREAKER TO HAVE LOCK-ON CLIP. 10 INDICATES BREAKER SHALL BE 'SWD' RATED. 2 10 INDICATES BREAKER SHALL BE 'SWD' RATED. 2 10 INDICATES BREAKER SHALL BE 'SWD' RATED. 2 2 10 INDICATES BREAKER SHALL BE 'SWD' RATED. 2 2 10 INDICATES BREAKER SHALL BE 'SWD' RATED. 2 2 10 INDICATES BREAKER SHALL BE COMBINATION 'ARC-FAULT / GFI' TYPE. 3 10 INDICATES BREAKER SHALL BE SHUNT-TRIP TYPE. 10 INDICATES BREAKER TO BE 'ARC-FAULT' TYPE. 5 10 INDICATES BREAKER TO HAVE LOCK-ON CLIP. 7 10 INDICATES BREAKER TO HAVE LOCK-ON CLIP. 10 INDICATES BREAKER TO HAVE LOCK-ON CLIP AND RED MARKING. </td <td>SEAL: SEAL: Sea: Sea:<</td>	SEAL: SEAL: Seal: Sea: Sea:<
ELEC N.T.S.	SEE CONTACTOR SCHEDULE. 12 TR-P- MUICATES BESIGNATION OF RELAY / LIGHTING CONTROL SYSTEM MODULE CONTROLLING GROUT. SEE LIGHTING CONTROL DETAKS. SEE CONTROLLING GROUT. SEE LIGHTING CONTROL DETAKS.	NADISON, WADISON, WATALLY TALLS

ELECTRICAL SPECIFICATIONS

Section 260010 - General Provisions

A. General 1. Requirements specified in Division 1, instructions to bidders, supplemental general conditions, special conditions, addenda, alternates, contract and proposal, along with Division 26, 27, 28 and all its sections, comprise the contract documents for the electrical contract, along with these specifications as though they were one, and anything implied by the specifications shall be interpreted as also implied by the drawings and vice versa. Provide necessary items for a complete installation of all electrically operated equipment listed in the specifications or shown on the contract drawings.

- 2. The architectural, structural, mechanical, plumbing and equipment drawings and specifications are incorporated into, and become a part of this division. This contractor shall examine all such drawings and specifications and become thoroughly familiar with the provisions contained therein. The submission of his bid shall indicate such knowledge.
- 3. Electrical drawings are diagrammatic. They are intended to show the approximate locations of equipment and conduit. Dimensions given on the plans, in figures, shall take precedence over scaled dimensions and shall be verified in the field. The electrical contractor shall layout all equipment rooms to make sure the equipment, as purchased, fits in the room or space shown. Exact location of all equipment shall be verified in the field and routing of conduits shall suit field conditions.
- 4. Until the time of installation, the architect reserves the right to make minor changes in the location of conduit and equipment without additional cost to the contract.
- 5. The electrical drawings and specifications are intended to supplement each other. Material and labor necessary to the project shall be furnished and installed even though not specifically mentioned in both. Labor and/or materials neither shown nor specified, but obviously necessary for the completion and proper functioning of the system, shall be furnished and installed by the electrical contractor.
- 6. Arrange all equipment substantially as shown on the drawings. Make deviations only where necessary to avoid interference. Check all equipment sizes against available space prior to shipment to avoid interference.
- 7. Examine the work of other trades insofar as their work comes in contact with or is covered by this work in no case attach to, or finish against any defective work or install work in a manner which will prevent proper installation of the work of other trades
- 8. Electrical contractor shall verify with other trades all electrical characteristics of equipment requiring electrical connections, contractor shall verify voltage, phase and horsepower and shall notify engineer of any discrepancies prior to start of work. Electrical contractor shall provide disconnecting means and overload protection for all equipment, unless furnished integral with equipment package.
- 9. It is the intent of these drawings that this be a complete electrical job, any errors or omissions shall be brought to the attention of the engineer prior to bidding the job.
- 10. Should any of the general notes, specifications, details or instructions on plans conflict, the strictest provision shall govern. 11.Do NOT scale drawings.
- 12. The contractor shall make provisions for the delivery and safe storage of his/her materials and equipment in coordination with the work of other trades. Materials and equipment shall be delivered at such stages of the work as will expedite the work as a whole and shall be marked and stored in such a way as to be easily checked and inspected. The arrival and placing of large equipment items shall be scheduled early enough to permit entry and setting when there is no restriction or problem due to size and weight. Protection of all finishes during delivery is the responsibility of the contractor.

B. Visit to the Site

1. This contractor shall visit the site of the work and familiarize himself with all conditions affecting his work. The submission of his proposal shall indicate such knowledge. No additional payment shall be made on claims that arise from a lack of knowledge of the existing conditions

C. Code and Permits

- 1. Installation shall be in full accordance with all codes, rules and regulations of municipal, city, county, state and public utilities and all other authorities having jurisdiction over the premises. 2. Comply with any specification requirements that are in excess but not in conflict with code
- requirements. 3. The contractor shall secure and pay for all permits, plan reviews and certificates of inspection in connection with his work, required by the foregoing authorities. Before final payment of the contract is allowed, all certificates shall be delivered to the architect in duplicate.
- 4. Electrical material and equipment shall bear the UL label except where UL does not label such types of material and equipment.

D. Shop Drawings Submittals

- 1. The electrical contractor shall submit product data and shop drawings. Each submittal shall be identified using the respective specification numbering system and titles. Each submittal shall clearly identify which products and options are applicable. The submittals shall be submitted through the architect to the engineer and then, if necessary, resubmitted for final approval. Submittals shall be submitted for the following items:
- D.a. Panelboards, including fault current study based on equipment being supplied. 2. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.
- 3. Each submittal shall be provided with a cover identifying the following:
 - D.a. Name of the job
 - D.b. Location of the job, address, city and state. D.c. Name and address of the company issuing the submittal.
 - D.d. Date of the submittal
- 4. All submitted product data and shop drawings (manufacturers' equipment descriptive sheets or vendors' prepared drawings) shall have the general contractor's or subcontractor's "stamp of approval" indicating that the item submitted is as called for on the plans and specifications, is approved by the general contractor or subcontractor, the date of approval and initialed by the person approving the submittal and the name of the company submitting said equipment for approval.
- 5. Any submittal not as specified shall be returned without review for corrections and re-submittal. 6. Every effort shall be made, in checking the shop drawings, to detect and correct all errors, omissions and inaccuracies. Failure to do this will not relieve the electrical contractor of the responsibility for the proper and complete installation in accordance with the contract documents.

E. As-built Drawings

- 1. Submit three paper-copy set(s) of marked-up record prints to the architect. Contractor shall use red ink for all contractor mark-ups on record prints.
- 2. Submit PDF electronic files of scanned record prints. Scanned record prints shall be in color. 3. Print and scan each drawing, whether or not changes and additional information were recorded.

Standards and Substitutions

- 1. Wherever the words "approved by", "approved equal", "as directed" or similar phrases are used in the following specifications, they shall be understood to refer to the owner as the approving agency. The name or make of any equipment or materials named in this specifications (whether or not the words "or approved equal" are used) shall be known as the "standard".
- 2. These specifications establish quality standard of materials and equipment to be provided. Specific items are identified by manufacturer, trade name or catalog designation. This contractor shall submit his base bid price based upon standard specified equipment described herein and as detailed on drawings and associated contract documents. These specifications are not to be considered proprietary. The contractor may submit information on materials and manufacturers (other than those listed) for review by the architect and engineer no later than ten (10) days before bids are submitted. Manufacturers of products accepted by the architect and engineer will be listed in an addendum to the specifications as an acceptable substitution equipment accepted as detailed below and shall be shown as a separate add or deduct price to be factored into the base bid price by the architect and owner if accepted.
- 3. <u>Should the contractor propose to furnish materials and equipment other than those specified or</u> approved by addendum, submit a written request for substitutions to the architect at the bid opening. The request shall be an alternate to the original bid; be accompanied with complete descriptive (manufacturer, brand name, catalog number, etc.) and technical data for all items. Failure by this contractor to submit the requisite documentation detailed above shall be understood by the architect and engineer to indicate that substitute equipment will not be presented by the contractor for consideration. Such substitutions will not be considered after the bid opening date and delay of project will not be permitted for further inspection and evaluation after this date.
- 4. Where such substitutions alter the design or space requirements indicated on the drawings, include all items of cost for the revised design and construction including cost of all allied trades involved. 5. Acceptance or rejection of the proposed substitutions shall be subject to approval of the architect and engineer. If requested, the contractor shall submit (at his cost) inspection samples of both the
- specified and proposed substitute items. 6. In all cases where substitutions are permitted, the contractor shall bear any extra cost of evaluating the quality of the material and equipment to be provided.

Section 260010 (cont.)

G. Testing and Placing in Service

- 1. Any material or equipment failing a test shall be repaired or replaced at the contractor's expense. 2. Tests shall include the following:
 - G.a. Measure the load on each phase of the main service and each phase of every feeder under full load conditions
 - phase to ground for each phase of each service, of each separately derived system, and at each panelboard or transformer). G.c. Measure the ground resistance of the main service grounding electrode and the
 - G.b. Measure the no-load and full-load voltages (phase to phase, phase to neutral and

- H. Interferences 1. Before the installation of any item begins, the electrical contractor shall carefully ascertain that it does not interfere with clearances for the erection of finish beams, columns, pilasters, walls or other structural or architectural members as shown on the architectural drawings. If any work is installed and the architectural design cannot be followed, this contractor shall, at his own expense, make changes in his work as directed by the architect to permit the completion of the architectural
 - work in accordance with drawings and specifications. 2. It shall be the duty of this contractor to report any interferences between his work and that of any of the other contractors as soon as they are discovered. The architect shall determine which equipment will be relocated, regardless of which was installed first. His decision will be final.

I. Quality Assurance

1. All products shall be new and of the type and quality specified. Where materials, equipment, apparatus or other products are specified by manufacturer, brand name, type of catalog number, such designation shall establish the standards of the desired quality and style. It is the intent of these specifications to establish a standard of quality of materials and equipment installed.

J. Special Inspections

- 1. Special Inspection (as applicable) is to be provided in addition to inspections conducted by the department of building safety and shall not be construed to relieve the owner or his/her authorized agent from requesting periodic and called inspections required by the building code. Special
- Inspection shall be paid by the owner.
- 2. Special Inspector shall meet the qualifications as stated in the applicable building code and shall perform the duties and responsibilities as outlined in the applicable building code. 3. The electrical contractor shall provide access to areas requiring testing or inspections, and provide requested documentation (if required by the Special Inspector).

Section 260050 - Basic Electrical Materials and Methods

- A. Nameplates 1. General: furnish and mount on each panelboard, large junction box, a nameplate descriptive of the equipment or equipment controlled. 2. Provide black and white nameplates constructed from laminated phenolic with a white center core. Letters shall be engraved in the phenolic to form white letters 3/8" high. Fasten the nameplates with

an adhesive type fastener.

- B. Mounting Accessories
 - concrete or plywood required to install, mount and support any electrical equipment or device called for on the plans.
 - 2. Supporting material shall be complete with hangers, connectors, bolts, clamps and necessary accessories to make a complete installation. Supporting material shall be galvanized, painted or otherwise suitably finished. Products by Binkley, Steel City, or Raco will be acceptable. 3. All surface-mounted equipment on block walls shall be mounted on 3/4" plywood backboard. All floor-mounted equipment shall be installed on a 4" high concrete housekeeping pad.

C. Execution

- 1. The electrical work for construction proposed shall conform to all federal (OSHA), state, all specific safety requirements and the requirements of the current edition of the NEC. 2. All cutting, patching, excavating, backfilling and concrete work related to this contract will be the responsibility of the electrical contractor. This contractor shall assume the responsibility of providing the sleeves, chases and openings necessary for the electrical installation and for their repair in an acceptable manner, as determined by the architect. All holes shall be core-drilled. Provide fire stopping materials, UL Listed for application, in all openings created through fire-rated walls, floors or ceilings, Contractor shall field verify slab on grade floor construction type prior to cutting. Under no circumstances shall the contractor cut a structural floor slab thicker than four (4") inches without prior written approval from Engineer of Record. Notify Engineer of Record of any slab thickness greater than four (4") inches prior to proceeding with any saw cutting.
- 3. This contractor shall be responsible for providing all required access panels necessary for his work, coordinate with architect prior to installation.

D. Materials and Workmanship

- 1. All work shall be installed in a practical and workmanlike manner, by mechanics skilled in the several trades necessary 2. All materials shall be new and free from defects and shall be the best of their several kinds unless
- specified or indicated on the drawings to the contrary.
- and excess materials caused by his work. He shall leave the area of operation broom clean.
- 3. During each phase and at the completion of the construction, this contractor shall remove all debris 4. All electrical equipment shall bear the underwriters laboratories label or ETL label.
- 5. This contractor shall guarantee his workmanship and material (lamps excepted) for a period of one year from the date of building opening and leave his work in perfect order at the completion. Should defects develop within the guarantee period, the contractor shall, upon notice of the same, remedy the defects and have all damages to other work or furnishings caused by the repairs corrected at his expense to the condition before such damage.

E. Scope of Work

- 1. The electrical contractor shall provide all labor, material, storage, unpacking and placement; to include but not be limited to, the following items: E.a. Complete electrical distribution system including, but not limited to panelboards and feeders.
 - E.b. Complete branch circuit wiring system. E.c. Testing of all cables and circuit wiring after installation.
 - E.d. Grounding and Bonding of the electrical system. E.e. Electric service.

- F. Electric Service 1. Provide trenching and backfill to the power company specifications. 2. Provide conduit for primary service where required by the power company. 3. Concrete encase conduits where required by the power company and where indicated on the
 - plans. 4. Provide metering to power company specifications. 5. Pay the cost of all power company charges connected with permanent electric service to the ATM. 6. Coordinate all work with the power company and perform any work necessary to assure a

 - the power company's requirements.
 - the power company prior to bidding.

	Syste
hase A	Black
hase B	Red
hase C	Blue
eutral	White
round	Greer

- 1. #12 and #10 conductors shall have continuous insulation color, as listed above. 2. Color code conductors larger than above, which do not have continuous insulation color by application of at least two laps of colored tape on each conductor at all points of access including junction boxes. Color tape shall be the equal of 3M products Scotch #35.
- 3. Conductors shall be soft annealed copper insulated for 600 volts unless specifically indicated otherwise. Aluminum conductors are not allowed on this project.
- B. Insulation type shall be type THWN for wire sizes #8 AWG and larger and THHN or THWN for #10 AWG and smaller. THHN shall not be used in wet or damp locations.
- C. Flexible cord shall be heavy duty type so with an equipment ground conductor in addition to the current carrying conductors.

- complete, working installation. The entire service installation shall be in complete conformance with 7. Verify the exact routing of the primary and secondary services, and all service requirements, with
- Section 260519 Wiring and Cable
 - 208/120 stem
- A. Color code conductors (except control and instrumentation conductors) as follows:

ground resistance of each separately derived system's grounding electrode. G.d. Make insulation resistance tests on all dry type transformers and motors. 3. Provide performance testing as required per N.E.C. or local authority having jurisdiction.

- 1. This contractor shall furnish and install all angle iron, channel iron, rods, supports, hangers,

Section 260519 (cont.)

- D. Provide #12 conductors, unless otherwise indicated. 1. Control conductors shall be #14 minimum for NEC class I and #16 for NEC class II.
- E. Conductors #8 AWG and larger shall be stranded.
- F. Conductors #10 AWG and smaller shall be solid.
- G. Install wiring in conduit.
- H. Connect #10 and smaller wires with constant pressure expandable spring type connectors, "Scotchlok" by 3M or B-Cap by Buchanan.
- I. Connect #8 and larger wires with compression connectors or splices as manufactured by Burndy or T&B.
- J. Insulate splicing connectors to at least 200% of the wire insulation. Use pre-stretched tubing connector insulators, 3M PST for #2 and larger conductors.
- K. Pull conductors using recognized methods and equipment leaving at least 6" wire at all junction boxes for connections 1. Clean out each conduit system before pulling wire.
- L. Form and tie all wiring in panelboards.
- M. There shall be no wirenut joints or splices made inside switchboards/panelboards.
- N. Branch circuit wire sizes (and conduits) shall be increased from those indicated on the plans to prevent excessive voltage drop. Branch circuits shall be installed with wires of sufficient size so that voltage drop between the panel and the loads does not exceed limit of 3%.
- O. Regardless of the temperature rating of the conductor insulation, all conductor ampacity rating for this project shall be determined from the 75°C conductor temperature ratings indicated in the NEC tables. Where equipment or devices are provided with terminals/lugs rated for 60°C, the ampacity rating of the 75°C conductor shall be limited to its associated 60°C rating as indicated in the NEC tables. The electrical contractor shall be responsible to increase the conductors and conduit size as required.
- P. Circuits may be multi-plexed in conduit provided wire is properly derated and conduit sized per code. Under no circumstances shall more than six (6) current carrying conductors be run in a single conduit.

Section 260526 - Grounding and Bonding

- A. Ground all equipment per N.E.C.
- B. Ground each outside lighting pole separately with one ground rod and a #6 ground wire.
- C. All conduits shall contain a code-sized ground wire size per N.E.C. in addition to the conductors shown on the plans. Where circuit conductors are increased in size for any reason (i.e. voltage drop, derating, etc.), the ground wire size shall be increased proportionately (according to circular mil area).

Section 260533 - Raceways and Boxes

- A. Raceways
 - 1. All wire shall be run in accordance with code in corrosion resistant, rigid, threaded, metal conduit or electrical metallic tubing (E.M.T.) unless otherwise specifically stated herein.
 - A.a. Conduit in exterior walls, below floor slab, or underground shall be rigid, threaded, galvanized, heavy wall type. A.b. Carlon PVC type 40 heavy wall conduit with ground wire may be used below floor slab or underground in lieu of rigid, threaded, galvanized conduit. PVC 40 conduit shall not
 - be run in or above floor slab. PVC conduit shall terminate below floor slab with rigid, threaded metal conduit adapter. Conduit above slab shall be metal. A.c. Conduit run exposed to the weather shall be heavy wall, metal threaded type.
 - 2. Conduit size shall be 3/4" minimum. 3. Conduit shall be securely fastened in place.
 - 4. Use watertight joints with buried and concrete encased conduit. All buried conduits outside of buildings shall have a minimum of 24" of cover. Metal conduits buried in earth shall be painted (two coats) with heavy asphaltum paint.
 - 5. Support runs of conduit as detailed in the appropriate table of the national electrical code (NEC). 6. Thread lubrication/sealant is required on outdoor and underground threaded metal joints.
- B. Pull and Junction Boxes
 - Install pull and junction boxes where shown on the drawings, and where required for changes in direction, at junction points, and to facilitate wire pulling. Furnish box sizes in accordance with NEC unless larger boxes are indicated.
 - 2. Provide steel boxes and removable covers of code gauge, hot rolled sheet steel, hot dipped galvanized inside and outside, for above ground work. Furnish weatherproof boxes when installed above ground outside.
 - 3. Provide cast iron boxes, hot dipped galvanized inside and outside where shown on the drawings. Furnish removable covers with gaskets and stainless steel, brass or bronze screws.
 - 4. Provide concrete boxes for underground work unless otherwise indicated on the drawings. Furnish steel frames and covers with the cover attached to the frame with hexagon head, brass or bronze cap screws, 3/8" in diameter. Provide a rubber gasket for sealing between the cover and the frame. Paint the cover with two coats of heavy asphaltum.

Section 260573 - Fault Current Study

- A. The fault current study shall be performed by the distribution equipment manufacturer. The study shall be submitted to the engineer prior to receiving final approval of the distribution equipment shop drawings and/or prior to release of equipment for manufacture. If formal completion of the study may cause delay in equipment manufacture, approval from the engineer may be obtained for a preliminary submittal of sufficient study data to ensure that the selection of device ratings and characteristics will be satisfactory.
- B. The fault current study shall be performed with the aid of a "Windows" based computer program.
- C. The input data shall include the power company's fault current contribution, resistance and reactance components of the branch impedances, the X/R ratios, base quantities selected and other source impedances.
- D. Short circuit momentary duty values and interrupting duty values shall be calculated on the basis of three phase bolted short circuits at each switchgear bus, switchboard, distribution panel, branch circuit panel, and other significant locations through the system. The short circuit tabulations shall include symmetrical fault currents and X/R ratios. For each fault location, the total duty on the bus, as well as the individual contribution from each connected branch, shall be listed with its respective X/R ratio.

Section 262416 - Panelboards

- A. Panelboards
- 1. Panelboards shall be enclosed dead front safety type with features and ratings as scheduled on the drawings.
- 2. Molded case circuit breakers shall be as scheduled on the drawings and specified in this division. All bus bar shall be rectangular solid copper. 4. Space, where shown in panel schedules, designates space for future protective devices and shall
- include bus and support. 5. Install cabinets so that center of the top breaker does not exceed 6'-6" above the finished floor. 6. Entries on directory cards shall be typed, complete and accurate.
- 7. All bolted connections shall be torqued in accordance with manufacturer's standards. 8. Electrical contractor shall arrange circuits as near as possible to circuit numbers on the drawings. At completion of job, electrical contractor shall take current reading checks of respective phases. A
- minimum of circuit connections shall be rearranged to balance, as closely as possible, the load in the panel. 9. All breakers shall be bolt-on type.
- 10. Manufacturer shall be Square D, Siemens, G.E., or Cutler-Hammer.

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