GMC

Goodwyn Mills Cawood 11 North Water Street Suite 15250 Mobile, Alabama 36602 T 251.460.4006 F 251.460.4423

TRANSMITTAL COVER SHEET

- DATE: December 12, 2023
- PAGE: 1 of 62 (INCLUDING THIS PAGE)
- TO: ALL CONTRACTORS
- FROM: Craig Sanford
- PROJECT: INTEGRITY PARK PHASE II FOR THE CITY OF SPANISH FORT GMC PROJECT NO. CMOB230047
- RE: ADDENDUM #1

PLEASE COMPLETE BELOW AND RETURN IMMEDIATELY.

Ashley Morris Email: <u>Ashley.Morris@gmcnetwork.com</u>

I, the undersigned, hereby acknowledge receipt of this Addendum.

Authorized Representative of Contractor

Date

Company Name

Telephone

Contractor's License Number (if applicable)



ADDENDUM NUMBER 1

INTEGRITY PARK PHASE II FOR THE CITY OF SPANISH FORT

GMC PROJECT NO. CMOB230047

1. <u>Revisions to Project Manual</u>

1.1 The following revisions are hereby added as Addendum No. 1 to the referenced Project Manual and Plans and shall be considered when preparing bids.

2. <u>Revisions to Drawings</u>

2.1 See the attached Revised Plan Set dated 12.7.2023, which replaces the set dated 12.6.2023.

3. <u>Revisions to Project Manual</u>

3.1 See attached Legal Bid Advertisement.

4. <u>Contractor Questions</u>

All questions and answers are included below in the following format:

- 4.1 On Sheet C-101, it calls out for fencing on the retaining wall, what type of fence is going there and what would the height be? If it is chain link, would they want it to be core drilled or flange mounted? All chain link fencing shall match detail 6 as shown on sheet SF4.00. See Site Note 15 on Sheet C-001 of Revised Plan Set from December 7, 2023 regarding the retaining wall. The system utilized for the installation of the fence shall be approved by the retaining wall manufacturer.
- 4.2 The asphalt Also, the typical says nothing about a prime coat but the specifications does. Which one is correct?

An ALDOT Section 401 Bituminous Prime Coat is required over the aggerate base and an Asphalt Emulsion Tack Coat is required over the Binder Course.

5. Acknowledgement of Receipt

- 5.1 Receipt of Addendum shall be acknowledged in two ways:
 - 5.1.1 Note on (EJCDC C-410) page 2 of <u>Bid Form</u> of the Project Manual Bidder acknowledges receipt of "Addendum No. 1" and date of "December 12, 2023".

AND

5.1.2 EMAIL GMC office immediately at <u>ashley.morris@gmcnetwork.com</u> with the signed transmittal which confirms the addendum has been received and is legible.

6. <u>Conclusion</u>

6.1 This is the end of Addendum Number 1, dated Tuesday, December 12, 2023.

ADVERTISEMENT FOR BIDS

CITY OF SPANISH FORT SPANISH FORT, ALABAMA INTEGRITY PARK PH. II

Sealed bids for the **Integrity Park Ph. II CMOB230047** will be received at Spanish Fort City Hall located at 7361 Spanish Fort Blvd., Spanish Fort, AL 36527, until **Thursday**, **December 21, 2023** at **10:00 A.M.** local time at which time the Bids received will be publicly opened and read.

The Project includes the following Work: **Construction of two soccer fields, two basketball courts, prefabricated metal building, asphalt parking, concrete sidewalks, field and site lighting, site grading and draining.**

Information for the Project can be found at the following designated website: www.gmcnetwork.com

The Issuing Office for the Bidding Documents is Goodwyn, Mills & Cawood, Inc., 11 N. Water St., Suite 15250, Mobile, AL 36602, Attn: Ashley Morris (251) 460-4006 or <u>ashley.morris@gmcnetwork.com</u>. Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of 8:00 a.m. – 5:00 p.m., and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Printed copies of the Bidding Documents may be obtained from the Issuing Office, during the hours indicated above, upon payment of a deposit of \$20.00 for a one-time administrative fee for digital access/file sharing and/or \$150.00 for each set. Said cost represents the cost of printing, reproduction, handling, and distribution, therefore no refund will be granted. Checks for Bidding Documents shall be payable to "GMC". Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

A pre-bid conference for the Project will be held on **Thursday, December 14, 2023** at **10:00 a.m.** at Spanish Fort City Hall located at 7361 Spanish Fort Blvd., Spanish Fort. Attendance at the pre-bid conference is encouraged but not required.

Bid security shall be furnished in accordance with the Instructions to Bidders.

The Owner reserves the right to waive any informalities or irregularities, or to reject any or all bids, and to award the contract to the best and most responsible bidder. All bidders shall submit, upon request, a list of projects "successfully completed" in the last 2 years, having the same or similar scope of work and approximate construction cost as specified in this project. All bidders must comply with requirements of the Contractor's Licensing Law of the State of Alabama and be certified for the type of work on which the proposal is submitted. Each bidder must deposit with his bid security in the amount, form and subject to the conditions provided in the Instructions to Bidders.

All Bidders bidding in amounts exceeding that established by the State Licensing Board for General Contractors must be licensed under the provisions of Title 34, Chapter 8, Code of Alabama, 1975, and must show evidence of license before bidding, or the bid will not be received or considered by the Engineer. The Bidder shall show such evidence by clearly displaying the license number on the outside of the envelope in which the Proposal is delivered.

No bidder may withdraw his bid within 60 days after the opening thereof.

Owner:City of Spanish FortBy:Michael M. McMillanTitle:MayorDate:Wednesday, November 22, 2023



Projects\AL\Spanish Fort, City of\CMOB230047 - Integrity Park Ph. II\0 DWG\1 - GO01 - COVER.dwg

		DRAWING INDEX							
SHT #	SEQ. #	SHEET TITLE							
		CIVIL							
1	G-001	INDEX TO DRAWINGS, VICINITY MAP & LOCATION MAP							
2	C-001								
4	C-002								
5	C-201	GRADING PLAN							
6	C-301	UTILITY PLAN							
7	C-401	STORM PROFILES							
8	C-601	PHASE I EROSION CONTROL PLAN							
9	C-602	PHASE II EROSION CONTROL PLAN							
10	C-701	DRAINAGE PLAN							
12	C-901	DETAILS							
13	C-903	DETAILS							
14	C-904	DETAILS							
15	C-905	DETAILS							
		ARCHITECTURAL							
16	A1.01	MAINTENANCE BUILDING FLOOR PLAN							
17	A2.01	DOOR SCHEDULE							
18	A3.01	MAINTENANCE BUILDING SECTIONS AND DOOR DETAILS							
		STRUCTURAL							
19	S1.10	FOUNDATION PLAN AND ROOF FRAMING PLAN							
20	32.1	ELECTRICAL							
21	GE0.01	ELECTRICAL SPECIFICATIONS							
22	GE0.02	ELECTRICAL SPECIFICATIONS							
23	GE0.03	ELECTRICAL SPECIFICATIONS							
24	GE0.04	ELECTRICAL SPECIFICATIONS							
25	E0.01	ELECTRICAL REFERENCES SITE PLAN							
26	E0.02								
21	E0.03	EXISTING ELECTRICAL SITE PLAN							
29	E0.05	SOCCER FIELD #1 LIGHTING PLAN ALTERNATE #2							
30	E0.06	SOCCER FIELD #2 LIGHTING PLAN							
31	E0.07	SOCCER FIELD #3 LIGHTING PLAN							
32	E0.08	BASKETBALL COURT LIGHTING PLAN							
33	E1.01	UTILITY STORAGE BUILDING - POWER & LIGHTING PLAN							
34	E2.01								
36	E2.02								
37	E2.04	ELECTRICAL DETAILS							
38	E3.01	POWER RISER DIAGRAM, DETAILS & SCHEDULES							
39	E3.02	PANEL SCHEDULES							
		LANDSCAPE							
40	SF1.00	OVERALL SPORTSFIELD PLAN							
41 42	5F1.01								
43	SF3.00	FIELD TYPICAL - BASKETBALL COURT							
44	SF4.00	SPORTSFIELD AND FENCING DETAILS							
45	L1.00	OVERALL PLANTING PLAN							
46	L1.01	PLANTING PLAN							
47	L1.02	PLANTING PLAN							
48	L1.03	PLANTING PLAN							
49 50	L1.04	PLANTING PLAN							
51	L1.06	PLANTING SCHEDULE, NOTES AND DETAILS							
52	L2.00	OVERALL IRRIGATION PLAN							
53	L2.01	IRRIGATION PLAN							
54	L2.02	IRRIGATION PLAN							
55	L2.03	IRRIGATION PLAN							
56	L2.04	IRRIGATION PLAN							
57	L2.05	LANDSCAPE PLANTING ENLARGEMENT PLAN							
58 50	L2.00								
l 33	LC.01								

	<u>SITE NOTES</u>
н	1. THE CONTRACTOR IS EXPECTED TO CAREFULLY EXAMINE THE PLANS, PROPOSAL AND SITE OF THE WORK. THEREFORE, IT WILL BE ASSUMED THAT THE BIDDER HAS SATISFIED HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN REGARDS TO THE CHARACTER, QUALITY, AND QUANTITIES OF WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND AS TO THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND CONTRACT. THE SUBMISSION OF A PROPOSAL BY A BIDDER WILL BE CONSIDERED PRIMA FACIE EVIDENCE THAT THE BIDDER HAS MADE SUCH AN EXAMINATION.
	2. THE WORK ON THIS PROJECT SHALL ADHERE TO THE FOLLOWING SPECIFICATIONS, STANDARDS AND/OR REGULATIONS:
_	ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM) AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) - "BEST MANAGEMENT PRACTICES MANUAL" AND THE REQUIREMENTS OF THE SITE SPECIFIC NPDES DISCHARGE PERMIT ISSUED FOR THIS PROJECT. ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - LATEST EDITION. ANY AND ALL REFERENCES TO UNIT PRICES ARE NOT APPLICABLE TO THIS PROJECT. CITY OF SPANISH FORT STANDARDS AND SPECIFICATIONS. BALDWIN COUNTY STANDARDS AND SPECIFICATIONS. THE PLANS AND SPECIFICATIONS.
G	IF CONFLICTS ARISE BETWEEN THESE REQUIREMENTS, THE MORE STRINGENT SHALL APPLY. 3. ALL TREES, SHRUBS AND LANDSCAPE MATERIAL TO BE REMOVED SHALL BE DISPOSED OF OFFSITE IN A LEGAL MANNER.
_	4. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH HAVING ALL UTILITIES LOCATED. ALL EXISTING UTILITIES TO BE UNCOVERED AND VERIFIED AS TO SIZE, LOCATION, ELEVATION AND CONDITION PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL COST ASSOCIATED WITH HAVING THE UTILITIES MARKED AND UNCOVERED ARE THE RESPONSIBILITY OF THE CONTRACTOR, REGARDLESS OF THE UTILITIES BEING SHOWN IN THE PLANS.
	5. THE CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION DEBRIS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
	6. THE COST OF ALL WORK SHOWN IN THE PLANS IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS STATED OTHERWISE.
=	7. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR TO PUBLIC AND PRIVATE ROADS CAUSED BY HIS ACTIVITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET WITH CITY, COUNTY AND STATE OFFICIALS TO AGREE UPON AND RECORD THE CONDITIONS OF THE ROADS BEFORE CONSTRUCTION COMMENCES.
_	8. THIS PLAN IS NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED OR DEMOLISHED BY THE CONTRACTOR. THERE ARE OTHER ITEMS NOT SHOWN THAT THE CONTRACTOR MUST REMOVE AND/OR REPLACE TO CONSTRUCT THE IMPROVEMENTS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE THE PLANS AND INVESTIGATE THE SITE PRIOR TO SUBMITTING A BID. HE/SHE SHALL INCLUDE IN HIS/HER BID WHATEVER MEANS HE/SHE FEELS IT WILL TAKE TO CONSTRUCT THE IMPROVEMENTS. THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR REMOVING ITEMS NOT NOTED AS SUCH ON THE THIS PLAN.
	9. GMC DOES NOT WARRANT THE ACCURACY OF THE TOPOGRAPHIC INFORMATION PROVIDED IN THESE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF OF THE ACCURACY OF THIS INFORMATION PRIOR TO COMMENCING CONSTRUCTION.
	10. ALL ROADWAY SIGNAGE, PAVEMENT MARKINGS, PAVEMENT STRIPING, PAVEMENT LEGENDS, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
	11. ALL PAVEMENT STRIPING IN STREET AND DRIVES SHALL BE CLASS 2, TYPE A IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION. THE PARKING SPACE STRIPING AND MARKINGS SHALL BE CLASS 1H, TYPE A IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION.
_	12. ALL ASPHALT PAVEMENT SHALL BE IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION. ANY AND ALL REFERENCES TO UNIT PRICES AND ASPHALT INDEX WITHIN ALDOT STANDARD SPECIFICATIONS DO NOT APPLY TO THIS PROJECT.
	13. A SIDEWALK ENTRANCES INTO THE STREETS, DRIVES AND PARKING LOT SHALL HAVE A RAMP WITH TRUNCATED DOMES. THE TRUNCATED DOMES SHALL SPAN THE WIDTH OF THE RAMP.
2	14. ALL STRIPING WITHIN THIS PROJECT SHALL BE DONE BY A STRIPING CONTRACTOR.
	15. THE RETAINING WALL SHALL BE KEYSTONE OR SIMILAR APPROVED BY ENGINEER. THE BLOCK TO BE USSED SHALL BE KEYSTONE STANDARD-TRIPLANE SERIES 1 OR SIMILAR APPROVED BY ENGINEER. THE CONTRACTOR SHALL PROVIDE DESIGN. ALL MATERIALS INCLUDING THE RAILING SYSTEM AND INSTALLATION FOR THE SYSTEM. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE FENCE TO AVOID ANY RUPTURE TO THE GEOGRID.
_	UTILITY NOTES
	1. ALL SANITARY SEWER GRAVITY PIPE SHALL BE SDR 26 PVC WITH A MINIMUM SLOPE OF 1.00%.
	2. ALL WATER LINES 6" AND LARGER SHALL BE C900 PVC.
	3. ALL WATER LINES 4" SMALLER SHALL BE CLASS 200 PVC.
;	4. 1/2" SANITARY SEWER FORCE MAIN SHALL BE SCH40 PVC.
	 ALL WATER LINES SHALL HAVE MINIMUM COVER OF 36 INCHES. IF THE WATER OR SANITARY SEWER LINE CROSSES ANY UTILITY WITH LESS THAN 2 FEET OF VERTICAL SEPARATION BETWEEN THE WATER AND SANITARY SEWER, THE TRENCH SHALL BE BACKFILLED WITH CRUSHED STONE AND THE PIPE MATERIAL SHALL BE DUCTILE IRON.
_	7. THERE SHALL BE A MINIMUM OF 18 INCHES OF VERTICAL CLEARANCE BETWEEN WATER AND SANITARY SEWER LINE CROSSINGS.
	8. WHENEVER POSSIBLE, WATER MAINS ARE ALLOWED TO CROSS OVER DRAINAGE PIPES AS LONG AS MINIMUM 36 INCHES OF COVER FROM TOP OF PIPE TO THE FINISH GRADE IS MAINTAINED.
	9. WATER MAINS THAT CROSS UNDER STORM PIPING 24 INCHES IN DIAMETER AND LARGER SHALL BE DUCTILE IRON PIPE ENCASED A MINIMUM OF 8 FEET IN EACH DIRECTION.
	10. 10 FOOT HORIZONTAL SEPARATION OF WATER MAIN AND STORM DRAINS IS REQUIRED.
	11. WHEREVER POSSIBLE, WATER MAIN SHALL CROSS ABOVE SEWER MAINS.
	<u>GRADING NOTES</u> 1. THE CONTRACTOR SHALL GRADE THE SITE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND
_	GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT.
	2. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
	3. ALL GRADING OPERATIONS TO BE MONITORED BY A QUALIFIED GEOTECHNICAL CONSULTANT AS CHOSEN AND PAID FOR BY THE OWNER.
4	4. ALL WORK REQUIRED TO COMPACT, MOISTEN, DRY, CONDITION, MODIFY, OR IMPROVE ANY PORTION OF THE SUBGRADE, AND/OR BUILDING PADS, AS DIRECTED BY THE PLANS AND SPECIFICATIONS OR THE ENGINEER, IS PART OF THE LUMP SUM BID.

5. ALL WORK ASSOCIATED WITH TOPSOIL STRIPPING, INCLUDING, BUT NOT LIMITED TO: STRIPPING TO SPREAD, STRIPPING TO STOCKPILE, SPREADING FROM STOCKPILE, SEEDBED PREPARATION, ETC., AS DIRECTED BY THE PLANS AND SPECIFICATIONS OR THE ENGINEER IS PART OF THE LUMP SUM BID.

ESITE, UNDERGROUND UTILITY LINE LOCATIONS, ELEVATION OF ALL SANITARY SEWER CTURES, ELEVATION OF ALL STORM SEWER STRUCTURES AND THE POND, AT THE END OF THE 1 AND COORDINATE SYSTEM AS THESE PLANS. THE SURVEY SHALL BE PREPARED IN RDANCE WITH THE STANDARDS OF PRACTICE OF THE STATE OF ALABAMA AND STAMPED BY A ONTRACTOR'S BID.

HE CONTRACTOR SHALL CONSTRUCT THE SLOPES WITH THE EQUIPMENT TRACKS TRAVERSING UP OWN THE SLOPE AS SHOWN IN THE DETAIL.

HE CONTRACTOR SHALL MAKE SURE THAT THE CROSS SLOPE OF THE NEW SIDEWALKS DOES NOT ED 2.00%. IF THE CROSS SLOPE IS CONSTRUCTED AT A SLOPE STEEPER THAN 2.00% THEN HE/SHE . BE REQUIRED TO REMOVE AND REPLACE THE SIDEWALK AT HIS/HER EXPENSE.

THE PAVEMENT, STONE OR SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE INITIAL RADE PREPARATION, THE CONTRACTOR SHALL BE REQUIRED TO RESTORE THE SUBGRADE PRIOR E PLACEMENT OF THE PAVEMENT, STONE OR SLAB. THE COST OF THE SUBGRADE RESTORATION BE INCLUDED IN THE CONTRACTOR'S BID.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LS ON THE BUILDING SLABS, STEPS RETAINING WALLS, ETC.

LL SPOT ELEVATIONS ARE EDGE OF PAVEMENT ELEVATIONS UNLESS STATED OTHERWISE.

URNING WILL NOT BE ALLOWED ON-SITE. DEBRIS SHALL BE HAULED OFFSITE AND DISPOSED OF IN AL MANNER.

HE CONTRACTOR SHALL COORDINATE WORK SHOWN IN THE CIVIL PLANS WITH THE WORK TO BE BY ALL OTHER TRADES. THIS INCLUDES, BUT IS NOT LIMITED TO WORK SHOWN ON THE TECTURAL, STRUCTURAL, PLUMBING, FIRE, MECHANICAL, ELECTRICAL AND LANDSCAPE NGS.

LL GRATE INLET SHALL BE US FOUNDRY 4156 FRAME AND 6241 GRATE (HEAVY DUTY) OR DVED EQUAL.

, DURING GRADING OPERATIONS, REMAINS ARE UNCOVERED ALL OPERATIONS WILL CEASE AND NGINEER WILL BE NOTIFIED. OPERATIONS WILL NOT CONTINUE UNTIL NOTIFIED BY THE ENGINEER.

ROSION/SEDIMENTATION CONTROL NOTES:

FHESE STANDARD DETAILS SHALL BE APPLICABLE TO ALL LAND DISTURBING ACTIVITIES.

HE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION/ MENTATION CONTROL MEASURES IN ACCORDANCE WITH ADEM/EPA "BEST MANAGEMENT TICES" AND ADEM NPDES CONSTRUCTION GENERAL PERMIT CONDITIONS. MEASURES SHOWN ON PLANS SHOULD BE CONSIDERED MINIMUMS. THE ENGINEER, QCP, ADEM AND/OR LOCAL IORITIES MAY REQUIRE THE CONTRACTOR TO CLEAN UP SILT/SEDIMENT, REPLACE EROSION ROL OR ADD ADDITIONAL EROSION CONTROL MEASURES AT ANY TIME OVER THE COURSE OF THE ECT, IF THE MEASURES IN PLACE DO NOT APPEAR TO BE ADEQUATE AND/OR FUNCTIONING ERLY. THE COST ASSOCIATED WITH ANY OF THESE CORRECTIVE MEASURES SHALL BE INCLUDED E CONTRACTOR'S BID, NO ADDITIONAL COMPENSATION WILL BE GIVEN TO THE CONTRACTOR FOR WORK.

MAINTENANCE OF SAID STRUCTURES AND /OR MEASURES IS THE RESPONSIBILITY OF THE FRACTOR. ALL CONTROL MEASURES SHALL BE CHECKED, AND REPAIRED AS NECESSARY, MONTHLY RY PERIODS, AND WITHIN 24 HOURS AFTER ANY RAINFALL AT THE SITE. DURING PROLONGED FALLS, DAILY CHECKING AND, IF NECESSARY, REPAIRING SHALL BE DONE. THE PERMITTEE SHALL TAIN WRITTEN RECORDS OF SUCH CHECKS AND REPAIRS ON SITE AT ALL TIMES, AND RECORDS _ BE SUBJECT TO INSPECTION AT ANY REASONABLE TIME.

LL BMPS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE CONDITIONS OUTLINED E ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORM WATER AGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, SPANISH FORT WATER, SEWER, AND FIRE ECTION AUTHORITY STANDARDS FOR EROSION AND SEDIMENT CONTROL, THE PLANS AND IFICATIONS. IF CONFLICTS ARISE BETWEEN THESE REQUIREMENTS, THE MORE STRINGENT SHALL

THE CONTRACTOR IS RESPONSIBLE FOR WHATEVER MEASURES ARE NECESSARY TO PRODUCE AND TAIN AN ACCEPTABLE STAND OF GRASS. SAID MEASURES TO INCLUDE (BUT NOT LIMITED TO) RING, RE-SEEDING, REGARDING ERODED AREAS, RE-FERTILIZING, ETC.

HE CONTRACTOR IS RESPONSIBLE FOR KEEPING MUD AND DEBRIS OFF PRIVATE STREETS, STATE STREETS AND ROW AT ALL TIMES. CLEANUP IS REQUIRED DAILY.

HE CONTRACTOR SHALL KEEP A COPY OF THE "BEST MANAGEMENT PRACTICES"/BMP ON SITE AT IMES FOR THE LIFE OF THE PROJECT.

ANY AREA THAT HAS BEEN CLEARED OF ITS VEGETATIVE COVER AND WILL REMAIN SO FOR FIFTEEN DAYS OR LONGER WITHOUT APPRECIABLE CONSTRUCTION ACTIVITY MUST BE SEEDED AND CHED WITHIN THIRTEEN (13) DAYS OF BEING DISTURBED. THOSE AREAS SHALL BE SEEDED AND CHED IN ACCORDANCE WITH THE LATEST EDITION OF THE AL.D.O.T. CONSTRUCTION IFICATIONS, UTILIZING THE SEED MIXES SHOWN ON THE DETAILS.

ADDITIONAL BUMPS MAY BE REQUIRED BY THE ENGINEER, CP, ADEM AND SPANISH FORT WATER, ER, AND FIRE PROTECTION AUTHORITY OVER THE COURSE OF THE PROJECT TO PREVENT SEDIMENT ASE FROM THE SITE. THE COST ASSOCIATED WITH THESE ADDITIONAL BMPS SHALL BE INCLUDED E CONTRACTOR'S BID, NO ADDITIONAL COMPENSATION WILL BE GIVEN TO THE CONTRACTOR FOR WORK.

FHE USE OF FLOC-BLOCKS/ POLYACRYLAMIDE (PAM) OR OTHER SETTLING ENHANCEMENT RIALS SHALL BE REQUIRED DURING THE COURSE OF CONSTRUCTION TO MINIMIZE TURBIDITY AND ENT SEDIMENT RELEASE FROM THE SITE. THE ENGINEER, QCP, ADEM AND HUGUELY WATER, ER, AND FIRE PROTECTION AUTHORITY MAY REQUIRE ADDITIONAL FLOC-BLOCKS/ PAM IF THE ITEMS USED ARE NOT ADEQUATE TO PREVENT THE RELEASE OF SILT/SEDIMENTATION. THE COST CIATED WITH THESE ADDITIONAL FLOC-BLOCKS/ PAM SHALL BE INCLUDED IN THE CONTRACTOR'S NO ADDITIONAL COMPENSATION WILL BE GIVEN TO THE CONTRACTOR FOR THIS WORK. AT A IUM PAM SHALL BE PLACED AT SLOPE PAVED HEADWALLS.

HE CONTRACTOR SHALL STABILIZE ALL DISTURBED AREAS IMMEDIATELY AFTER THE COMPLETION IE GRADING OPERATION.

MAINTENANCE OF ALL EARTH SURFACES, INCLUDING DITCH/SWALE SLOPES, IS THE RESPONSIBILITY HE CONTRACTOR. SAID MAINTENANCE TO INCLUDE REGRADING, TEMPORARY GRASSING, MOWING, AS MAY BE REQUIRED.

THE ENGINEER OR THE QCP MAY REQUIRE THE CONTRACTOR TO CLEAN UP SILT/SEDIMENT, ACE EROSION CONTROL OR ADD ADDITIONAL EROSION CONTROL MEASURES AT ANY TIME, IF THE SURES IN PLACE DO NOT APPEAR TO BE ADEQUATE AND/OR FUNCTIONING PROPERLY. THE COST ICIATED WITH ANY OF THESE CORRECTIVE MEASURES SHALL BE INCLUDED IN THE CONTRACTOR'S IO ADDITIONAL COMPENSATION WILL BE GIVEN TO THE CONTRACTOR FOR THIS WORK.

12. CONTRACTOR SHALL DEMOLISH ALL UTILITIES, PAVEMENT, CONCRETE, TREES, BUILDING FOUNDATIONS, ETC. WITHIN THE DEMOLITION LIMITS UNLESS CALLED TO REMAIN WITHIN THESE PLANS.

13. ALL THE TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAYS WORK. THE MATERIAL USED FOR BACKFILL ACTIVITIES SHALL BE CLEAN WITHOUT ORGANICS OR DEMOLITION DEBRIS. THE BACK FILL MATERIAL SHALL BE PLACED AND COMPACTED IN 12" LOOSE LIFTS TO 90% STANDARD PROCTOR DETERMINED BY AASHTO T-99

14. AREAS DESIGNATED AS TEMPORARY STORAGE, CONSTRUCTION TRAILERS, EMPLOYEE PARKING, AND CONSTRUCTION ROAD SHALL BE CLEARED AND GRUBBED. DRIVABLE GRAVEL SURFACE SHALL BE PLACED OVER A FILTER FABRIC AND SHALL BE 8-10" THICK.

HE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH AN AS-BUILT SURVEY OF THE ECT. THIS SURVEY SHALL BE PREPARED ON A MAXIMUM 50-FOOT GRID. ALL HIGH SPOTS AND LOW S SHALL ALSO BE INCLUDED IN THE SURVEY. THE SURVEY SHALL BE PERFORMED ON THE SAME EYOR LICENSED IN THE STATE OF ALABAMA. THE COST OF THIS SURVEY SHALL BE INCLUDED IN

HE CONTRACTOR SHALL INSTALL SPILL OUT CURB & GUTTER WHERE REQUIRED BY THE GRADES.

15. THE CONTRACTOR SHALL FREQUENTLY REMOVE ANY AND ALL SILT/SEDIMENTATION FROM THE SILT FENCE, DITCHES, CHECK DAMS AND DETENTION AREAS AS PER ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORM WATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS. AT THE END OF CONSTRUCTION THESE AREAS SHALL BE COMPLETELY FREE OF SILT/SEDIMENTATION AND SHALL BE STABILIZED AS STATED IN THE PLANS AND SPECIFICATIONS.

16. MAINTENANCE OF ALL EARTH SURFACES, INCLUDING DITCH/SWALE SLOPES, IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL AN ACCEPTABLE STAND OF GRASS IS OBTAINED. SAID MAINTENANCE TO INCLUDE REGRADING, TEMPORARY GRASSING, MOWING, ETC. AS MAY BE REQUIRED.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES ONCE ACCEPTABLE PERMANENT STABILIZATION IS ACHIEVED. THE OWNER AND QCP/ENGINEER SHALL DETERMINE IF THE PERMANENT STABILIZATION IS ACCEPTABLE PRIOR TO REMOVAL OF ANY TEMPORARY EROSION CONTROL MEASURES.

18. THE CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE INSTALLATION OF A MINIMUM 20 FT X 30 FT GRAVEL CONSTRUCTION ENTRANCE/ EXIT PAD. SEE THE CONSTRUCTION EXIT/ENTRANCE PAD ON DETAILS.

19. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCES AS REQUIRED TO PREVENT SILT/SEDIMENTATION FROM LEAVING THE SITE. THIS INCLUDES BUT IS NOT LIMITED TO WASHING DOWN OF THE CONSTRUCTION ENTRANCE

20. ALL AREAS OUTSIDE OF THE BUILDING AND PAVEMENT AREA TO RECEIVE A 6-INCH LAYER OF TOPSOIL. TOPSOIL SHALL BE AS FOLLOWS:

- A. FERTILE, FRIABLE, NATURALLY OCCURRING. FREE OF STONES, CLAY, LUMPS, HARDPAN, ROOTS, STUMPS, BRANCHES, STICKS AND OTHER DEBRIS LARGER THAN ONE (1) INCH IN ANY DIMENSION; FREE OF NOXIOUS WEEDS, GRASSES, SEEDS, PLANTS, EXTRANEOUS MATTER AND ANY SUBSTANCE
- HARMFUL TO PLANT GROWTH. TOPSOIL FROM OPEN FIELDS WILL NOT BE ACCEPTED. 5.0 TO 7.0

5% TO 10%

50% TO 70%

LESS THAN 30%

- PH:
- ORGANIC MATTER:
- SAND: D. F. SILT:
 - CLAY: 10% TO 25% PERMEABILITY RATE OF 5 X 10 <-3> CENTIMETERS OR GREATER AT 85% COMPACTION.

21. ALL DISTURBED AREAS OUTSIDE THE BUILDING AND PAVEMENT AREA TO BE SEEDED AND MULCHED WITH THE APPROPRIATE ALDOT MIXTURE.

22. ALL STORM DRAINAGE INLETS AND JUNCTION BOXES TO BE PROTECTED FROM SEDIMENTATION AT ALL TIMES. THESE STRUCTURES SHALL BE PROTECTED WITH SILT SAVERS OR PRE-APPROVED EQUIVALENT PRIOR TO THE FRAME AND GRATE/LID BEING INSTALLED. IF THE CONTRACTOR UTILIZES ROUND BOXES, THEN ROUND FRAME SILT SAVERS SHALL BE USED. ONCE THE FRAME AND GRATE/LID IS PLACED ON THE INLETS, AND JUNCTION BOXES, THE CONTRACTOR SHALL UTILIZE DANDY SACKS OR PRE-APPROVED EQUIVALENT. GUTTER EELS SHALL BE UTILIZED UNTIL ALL VEGETATION HAS BEEN INSTALLED AND "GROWN IN".

23. THE CONTRACTOR SHALL UTILIZE NEW FILTERS ON THE SILT SAVERS AT THE BEGINNING OF THE PROJECT. THE CONTRACTOR SHALL BE REQUIRED TO REPLACE THE FILTERS WHENEVER THE ENGINEER, QCP OR SPANISH FORT WATER, SEWER, AND FIRE PROTECTION AUTHORITY STATES THEY ARE NOT ADEQUATE. THE COST OF THE REPLACEMENT FILTERS SHALL BE INCLUDED IN THE CONTRACTORS BID. THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR THE COST OF REPLACING THE FILTERS.

24. THE CONTRACTOR SHALL PERMANENTLY STABILIZE ALL DISTURBED AREAS PRIOR TO FINAL ACCEPTANCE OF WORK. PERMANENT STABILIZATION SHALL CONSIST OF FINE GRADING TO REMOVE ALL REELS, PERMANENT SEEDING SHALL BE PLACED ALONG WITH STRAW, AND SAID PERMANENT GRASSING SHALL HAVE TAKEN ROOT AND BE ESTABLISHED IN A MANNER TO PREVENT EROSION REELS FROM FORMING. THE CONTRACTOR SHALL RESEED, WATER, REDRESS WASHES, CUT TEMPORARY VEGETATION OR ANY PERFORM ANY OTHER WORK NECESSARY TO ESTABLISH PERMANENT VEGETATION. ALL COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED THE FINAL BID PRICE.

25. TEMPORARY STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER WORK TOWARD PROJECT COMPLETION AND FINAL STABILIZATION OF ANY PORTION OF THE SITE HAS TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING THIRTEEN (13) CALENDAR DAYS. THOSE AREAS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE LATEST EDITION OF THE ALDOT CONSTRUCTION SPECIFICATIONS.

26. ALL HAZARDOUS SUBSTANCES USED FOR THIS PROJECT (PAINT, OIL, GREASE, AND OTHER PETROLEUM PRODUCTS) SHALL BE STORED IN ACCORDANCE WITH SPCC REGULATIONS. THESE SUBSTANCES SHALL BE STORED AWAY FROM STORM DRAINS, DITCHES, AND GUTTERS IN WATERTIGHT CONTAINERS. DISPOSAL OF THESE SUBSTANCES SHALL BE IN ACCORDANCE WITH ADEM REGULATIONS. CONTRACTOR SHALL PROVIDE ADEQUATE TRASH CONTAINERS ON SITE FOR THE DISPOSAL OF CONSTRUCTION MATERIALS WASTE. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY TRASH OR OTHER POLLUTANTS FROM ENTERING STORM DRAINS.

27. THE CONTRACTOR SHALL HAVE A WATER TRUCK AVAILABLE AT ALL TIMES TO HELP KEEP THE DUST DOWN ON THE SITE.

28. THE CONTRACTOR SHALL PROVIDE A FACILITY ON SITE FOR SANITARY WASTE DURING CONSTRUCTION AND SHALL ALSO PROVIDE A CONTAINER CAPABLE OF HOLDING CONSTRUCTION MATERIAL AND DEBRIS. ALL CONSTRUCTION WASTE AND DEBRIS AND TEMPORARY BMPS ARE TO BE REMOVED FROM THE SITE ONCE THE SITE HAS BEEN PERMANENTLY STABILIZED AND SHALL BE DISPOSED OF AT A LANDFILL CAPABLE OF HANDLING SAID DEBRIS.

DEMOLITION NOTES:

1. ALL TREES, SHRUBS AND LANDSCAPE MATERIAL TO BE REMOVED SHALL BE DISPOSED OFF SITE.

2. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH HAVING ALL UTILITIES LOCATED. ALL EXISTING UTILITIES TO BE UNCOVERED AND VERIFIED AS TO SIZE, LOCATION, ELEVATION AND CONDITION PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL COST ASSOCIATED WITH HAVING THE UTILITIES MARKED AND UNCOVERED ARE THE RESPONSIBILITY OF THE CONTRACTOR, REGARDLESS OF THE UTILITIES BEING SHOWN IN THE PLANS.

3. THE CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION DEBRIS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

4. THIS PLAN IS NOT INTENDED TO SHOW EACH AND EVERY ITEM TO BE REMOVED OR DEMOLISHED BY THE CONTRACTOR. THERE ARE OTHER ITEMS NOT SHOWN THAT THE CONTRACTOR MUST REMOVE AND/OR REPLACE TO CONSTRUCT THE IMPROVEMENTS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE THE PLANS AND INVESTIGATE THE SITE PRIOR TO SUBMITTING A BID. HE/SHE SHALL INCLUDE IN HIS/HER BID WHATEVER MEANS HE/SHE FEELS IT WILL TAKE TO CONSTRUCT THE IMPROVEMENTS. THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR REMOVING ITEMS NOT NOTED AS SUCH ON THE THIS PLAN.

5. THE CONTRACTOR SHALL SAW CUT THE EXISTING ASPHALT AND / OR CONCRETE IN THE LOCATIONS WERE THE ASPHALT/CONCRETE IS TO BE REMOVED.

6. THE CONTRACTOR SHALL BE REQUIRED TO GO BACK AND SAW CUT A 5' STRIP OF ASPHALT TO CREATE A "CLEAN" EDGE, IF THE EXISTING ASPHALT IS DAMAGED IN REMOVING THE CURB AND GUTTER. THE COST ASSOCIATED WITH THIS REPARATION SHALL BE AT THE CONTRACTOR EXPENSES.

7. THE CONTRACTOR SHALL REMOVE THE CONCRETE BACK TO A CLEAN CUT AND UNIFORM CONSTRUCTION JOINT TO MINIMIZE THE "PATCH" LOOK IN ALL SIDEWALK AND CURB AND GUTTER TO BE REMOVED.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COST ASSOCIATED WITH THE REMOVAL/RELOCATION OF THE EXISTING UTILITIES REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE APPROPRIATE UTILITY COMPANY.

9. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING LANDSCAPING AND IRRIGATION THAT CONFLICT WITH THE IMPROVEMENTS SHOWN IN THESE PLANS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

10. ONLY TREES THAT DIRECTLY IMPACT AND/OR IMPEDE CONSTRUCTION SHALL BE REMOVED, UNLESS APPROVED BY THE ENGINEER AND OWNER.

11. THE CONTRACTOR'S BID SHALL INCLUDE ALL COST TO REMOVE AND RELOCATE THE EXISTING UTILITIES THAT CONFLICT WITH THE IMPROVEMENTS SHOWN IN THE PLANS AND RECONNECT THESE UTILITIES. SUCH THAT THE OWNER HAS A WORKING SYSTEM WHEN THIS PROJECT IS COMPLETE.

15. BURNING IS NOT PERMITTED.

16. CONTRACTOR SHALL FOLLOW THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1970 STANDARDS FORE TRENCHING AND EXCAVATIONS ACTIVITIES DESCRIBED IN THE 29CERF 1926 OSHA CONSTRUCTION INDUSTRY REGULATIONS SUBPART P (EXCAVATIONS), SUBPART S (UNDERGROUND CONSTRUCTION 196.800) AND SUBPART V (UNDERGROUND LINES 1926.956)

17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING UTILITIES PRIOR TO PURCHASING OF MATERIAL.

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1 کار 1 1 Projects\AL\Spanish Fort, City of\CMOB230047 — Integrity Park Ph. II\D DWG\C=602 EXISTING CONDITIONS.cwg REQ'D INLET TOP TO BE REMOVED. STORM PIPE TO BE CAPPED AT BOTH ENDS AND
 FILLED WITH CONCRETE GROUT. THE BOTTOM STRUCTURE SHALL
 REMAIN. HOLES SHOULD BE DRILLED IN THE BOTTOM OF THE STRUCTURE AND IT SHOULD BE FILLED WITH SAND.

5

REQ'D IRRIGATION WELL TO REMAIN IN PLACE. THE
 PRESSURE TANK TO BE REMOVED AND RESET AT
 LOCATION SHOWN ON C-301. ELECTRICAL COMPONENTS
 SHALL BE RELOCATED. THE CONTRACTOR SHALL
 COORDINATE WITH THE OWNER ON THE FINAL LOCATION
 OF ELECTRICAL PANELS. THE EXISTING CASING SHALL
 BE CUT 36" BELOW THE PROPOSED GRADE TO INSTALL A
 NEW WATERTIGHT CAP AND AN AIR RELEASE VALVE.

1-GI TO 4-GI

0+00

16-GI TO 22-JB

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24-GI TO 26-SPHW

22-JB TO 8-SPHW

27-SPHW TO 29-SPHW

-	<u> </u>	1	I		2		I		3			4
			Post Deve	opment Drainage	e Calculation - 2	25 Years Stor	m Event					
	Area No.	Inlet 2-Gl	Area (st) 10,776	Area (ac) C 0.25 0.	w L 95 157	h 2.14	s 1.36	Tc 5.00	i 12.96	Q (cfs) 3.05		
	1A	1-Gl	31,522	0.72 0.	95 266	5.59	2.10	5.00	12.96	8.91		
н	3	3-Gl 4-Gl	1,344	0.14 0.	74 112 35 37	0.55	3.49 1.49	7.20	12.96	0.12		R
	4	5-Gl	16,324	0.37 0.	71 148	2.46	1.66	7.22	11.41	3.04		re l
	6	7-Gl	21,802	0.50 0.	35 135 35 135	1.82	1.35	14.21	8.00	1.40	R	
	7	9-GI	34,621	0.79 0.	95 152 35 217	1.15	0.76	5.00	12.96	9.79		
	9	11-Gl 12-Gl	31,686	0.78 0. 0.73 0.	55 217 66 90	1.33	1.29	6.67	11.80	5.63		
_	10	13-GI	26,513	0.61 0.	73 91 49 148	0.70	0.77	6.94	11.61	5.16		
	12	14-Gl	28,614	0.66 0.	45 148 35 120	1.82	1.52	12.89	8.46	1.95		~ /
	13	16-GI	3,103	0.07 0.	35 57 35 71	0.74	1.30	9.35 7.83	9.93	0.25		
	15	19-GI	43,356	1.00 0.	35 71 35 120	2.41	2.01	11.75	8.86	3.09	\langle	
G	16	20-GI 21-GI	43,337	0.99 0.	35 120 35 120	2.41	2.01	11.75 11.75	8.86 8.86	3.09		
_	18	24-GI	35,390	0.81 0.	35 120	2.41	2.01	11.75	8.86	2.52		
	19	25-GI	28,554	0.66 0.	35 120	2.41	2.01	11.75	8.86	2.03		\$
		Pij	oe Sizes - 25 Ye	ars Storm Event							,	
	STR 1 CI	TO	STR Ad	ded Q Total Q	Pipe	Min. Slope,%			145 122			
_	2-GI	- 4	1-GI	8.91 8.91 8.05 11.96	24	0.18			744-7			
	3-61		1-61	37 1 37	18	0.02		E I	7 / (
	4-GI	- !	5-GI ().12 13.45	24	0.35				W. W.		
	5-GI		7-GI 3	3.04 16.49	30	0.16	-(((S.				
F	9-GI	- 1	0-GI 9	9.79 9.79	24	0.19			- 30 - 1		We W	
	10-GI	- 1	3-GI	- 9.79	24	0.19						
	11-GI	- 1	2-GI 1	94 194	18	0.03						
	12-GI 13-GI	- 1	3-Gl 5	5.63 7.57 5.16 22.51	24	0.11	192					
	14-GI	- 1	5-GI (0.99 23.50	36	0.12	100 F	en la				
_	16-GI	- 1	8-JB ().25 0.25	18	0.00						
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	17-GI 18-JB	- 1	9-GI (0.56 0.56 - 0.81	<u>18</u> 18	0.00						
	19-GI	- 2	0-GI	3.09 3.90	18	0.14		5		,	,5 ⁶	
Е	20-Gi	- 2	2-JB 1	1.09 6.99 1.02 8.01	24	0.10		1			° Š	
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	15-GI	- (5-GI 1	.95 33.45	36	0.25			/	\$		5
	6-GI	8-0	7-GI 1	.40 34.85	36	0.27	-					
						0.20	-					
	24-GI 25-GI	- 2	5-GI 2 SPHW 2	2.52 2.52 2.03 4.55	<u>18</u> 18	0.06	-		/			
D												
С				EXISTIN BOTTO TOP EL PEAK 1 EVENT	NG DETENTION M ELEVATION EVATION: 186 00YR/24HR ST ELEVATION:18	N POND A : 178.00' :00' FORM 84.87'						
B	ې بې	0 5 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										
	-OHE OHE	PRE & PO STORM EV (YEAR)	ENT PRE L	MENT DETENTIO	DN POND OUT	LET (A) ELOPMENT S)			OHE		-OHE	
		2YR/25H	R	0.16	0.0	00						
		5YR/25H	R	0.81	0.0	00						
				2.67	4 7	79						- 0
A	OHE			2.01	1.7	3		(DHE	OHE	OHE	
		25YR/25H		4.68	3.4	41						
		50YR/25H		10.80	8.0	01						
		100YR/25	IR	15.26	11.	21						

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1 Projects\AL\Spanish Fort, City of\CMOB230047 - Integrity Park Ph. II\0 DWG\C-901 DETAILS.cwg

REQUIREMENTS OF TABLE 2.

TABLE No. 1 RECOMMENDED TRENCH WIDTH								
DIAMETER	TRENCH WIDTH							
12"	34"							
15"	38"							
18"	44"							
24"	ō4"							
30"	65"							
36"	75"							
42"	90"							
48"	100"							
54"	110"							
60"	125"							
66"	135"							
72"	150"							

- SILT FENCE

FLOW SILT FENCE TO BE BURIED 6"x 6"'INTO NATURAL

1 \1 Projects\AL\Spanish Fort, City of\CMOB230047 — Integrity Park Ph. II\0 DWG\C-901 DETAILS.cwg

2

\1 Projects\AL\Spanish Fort, City of\CMOB230047 - Integrity Park Ph. II\0 DWG\C-901 DETAILS.cwg

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DOOR	SCHEDULE

	L	$J \cup U$	R S		DUL	. 匚			
	SIZE		FRAME	HDWR.		DETAILS			
DTH	HEIGHT	THICK.	TYPE	SET NO.	HEAD	JAMB	SILL	REMARKS	
)"	7'-0"	1 3/4"	HM - 1	set no1	3/A3.01	2/A3.01	1/A3.01	RAIN HOOD	
)"	10'-0"		COIL - 1	set no2	4/A3.01	5/A3.01	6/A3.01	COILING DOOR	
)"	10'-0"		COIL - 1	set no2	4/A3.01	5/A3.01	6/A3.01	COILING DOOR	
)"	7'-0"	1 3/4"	HM - 1	set no1	3/A3.01	2/A3.01	1/A3.01	RAIN HOOD	
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5 6 7 7 8 9 10 This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.

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GORDON L. DAVIS STRUCTURAL ENGINEERING CONSULT P.O. BOX 241371 MONTGOMERY, ALABAMA 36124-13 (334)213-3070 FAX (334)213-40

TYPICAL SAWED CONTROL JOINT

SI	PREAD FOOTING SC	HEDULE
MARK	SIZE	REINF.EA.WAY
SF – 1	2'-0"×2'-0"×1'-0"	3-#4
SF -2	2'-6"×2'-6"×1'-0"	3-#5
SF - 3	3'-0"×3'-0"×1'-0"	4-#5
SF - 4	3'-6"×3'-6"×1'-0"	4-#5
SF -5	4'-0"×4'-0"×1'-0"	4-#5

SOIL BEARING PRESSURE = 2500 psf

ALL FOOTINGS SCHEDULED ARE NOT NECESSARILY USED.

2. h: MEAN ROOF HEIGHT, IN FEET, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR 3. PRESSURES SHOWN ARE APPLIED NORMAL (PERPENDICULAR) TO THE SURFACE. 6. PRESSURES INDICATED ARE FOR COMBINATIONS OF EXTERNAL AND INTERNAL PRESSURES. 7. WIND PRESSURES ARE BASED UPON CHAPTER 30 - PART 1 (LOW RISE BUILDINGS) ASCE 7-16.

8. PRESSURES INDICATED ARE BASED UPON WIND VELOCITIES INDICATED IN CHAPTER 26 -ASCE 7-16 AND ARE FOR STRENGTH DESIGN. MULTIPLY WIND PRESSURE SHOWN BY 0.77

	WIN	DI	- -	RESS	SUF	ΥE	S																
																	WA	LL					
		3	E					3	R					2	1					5	5		
+	31.6	psf	- 1	40.4	psf	+	31.6	psf	- 1	66.9	psf	+	47.7	psf	-	51.7	psf	+	47.7	psf	Ι	63.6	psf
+	28.5	psf	- 1	21.4	psf	+	28.5	psf	- 1	43.0	psf	+	45.6	psf	-	49.6	psf	+	45.6	psf	I	59.4	psf
+	24.3	psf	Ι	96.3	psf	+	24.3	psf	- 1	11.4	psf	+	42.8	psf	-	46.8	psf	+	42.8	psf	1	53.8	psf
+	21.2	psf	-	77.3	psf	+	21.2	psf	-	87.4	psf	+	40.7	psf	-	44.6	psf	+	40.7	psf	-	49.6	psf
+	21.2	psf	-	52.1	psf	+	21.2	psf	-	52.1	psf	+	35.8	psf	-	39.7	psf	+	35.8	psf	-	39.7	psf

9 10		
<u>structural notes</u>		
APPLICABLE CODES AND SPECIFICATIONS		
INTERNATIONAL BUILDING CODE - 2021 AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION		
AMERICAN IRON AND STEEL INSTITUTE AMERICAN SOCIETY FOR TESTING AND MATERIALS AMERICAN WELDING SOCIETY		
ASCE/SEI 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES		
A. ROOF LIVE LOAD (ON HORIZONTAL PROJECTION)		
FOR MEMBERS SUPPORTING 0-200 SQ. FT		
B. GROUND SNOW LOAD (Pg)0 psf		
SNOW EXPOSURE FACTOR (Ce)		
C. WIND LOAD		
ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)(Vult)		
WIND EXPOSUREC INTERNAL PRESSURE COEFFICIENTC COMPONENTS AND CLADDINGSEE DIAGRAM	500	
ΕΠΙΝΟΛΤΙΩΝΟ	inite :	
FOOTINGS ARE DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 2000 psf FOR SQUARE COLUMN FOOTINGS AND 2000 psf FOR CONTINUOUS WALL FOOTINGS, FOOTINGS SHALL BE	ne, S 117	_
PLACED ON A FIRM STRATA CAPABLE OF SAFELY SUSTAINING THESE LOADS. FILL UNDER FOOTINGS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY (ASTM D-698).	se La L 36	. c 0
SEE SPECIFICATIONS FOR COMPACTION AND TESTING REQUIREMENTS. FOOTING ELEVATIONS SHOWN ON PLAN ARE MINIMUM DEPTH.	Chas ry, Al	1.320 о r k
UNUSUAL SOILS CONDITIONS MAY REQUIRE CHANGE IN FOOTING ELEVATION. CONTACT ARCHITECT AND/OR ENGINEER FOR APPROVAL TO CHANGE ELEVATION.	East	4.2 7′ етw
SLAB ON GRADE	660 ł	х с х с х с х с х с х
UNLESS OTHERWISE NOTED, ALL SLABS ON GRADE SHALL BE REINFORCED WITH ONE LAYER 6X6-10/10 W.W.F. PLACED AT 1/3 SLAB THICKNESS FROM TOP.	ŠΛ	H 0
FILL UNDER SLAB SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY (ASTM D-698). SEE SPECIFICATIONS FOR COMPACTION AND TESTING REQUIREMENTS.		
CONCRETE (CAST-IN-PLACE)		
MINIMUM COMPRESSIVE STRENGTH OF CAST-IN-PLACE CONCRETE AT 28 DAYS SHALL BE:	<u>ທ</u>	
FUUNDATIONS	ATE 20.202	
SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.		
REINFORCING STEEL REINFORCING BARS SHALL BE DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A615	FINA	
SPECIFICATIONS. WELDED STEEL WIRE FABRIC SHALL BE PLAIN STEEL WIRE CONFORMING TO ASTM A185 SPECIFICATIONS.		DRAV
MINIMUM YIELD STRENGTHS (fy) SHALL BE AS FOLLOWS: REINFORCING BARS		
WELDED WIRE FABRIC		
NOT BE LESS THAN:		
B. EXPOSED TO EARTH OR WEATHER		
#5 BARS AND SMALLER		
AT CORNERS AND INTERSECTIONS, PROVIDE HOOKS OR CORNER BARS.		
DETAILED HORIZONTAL REINFORCEMENT, 24 DIAMETERS MINIMUM LAP.		
STRUCTURAL STEEL MINIMUM MATERIAL STRENGTHS SHALL BE AS FOLLOWS:	LD	
STRUCTURAL STEEL	FIE T, AL	047
ANCHOR RODS	ER FOR	230
PREFARRICATED METAL RULLDINGS		IOB
ALL PREFABRICATED METAL BUILDING ELEMENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN STRICT ACCORDANCE WITH APPLICABLE CODES AND SPECIFICATIONS TO SUPPORT	SF SC SPA	CN
ALL LIVE LOADS NOTED ABOVE, DEAD LOADS AND CONCENTRATED LOADS, REQUIRED LATERAL BRACING (TEMPORARY AND PERMANENT) SHALL BE DESIGNED AND NOTED ON ERECTION DRAWINGS BY THE MANUFACTURER.		
VERIFY ALL DIMENSIONS AND DETAILS SHOWN. NOTIFY ARCHITECT AND/OR ENGINEER OF ANY REQUIRED MODIFICATIONS.	**************************************	S/ Same
SUBMIT DESIGN DRAWINGS BEARING THE ENGINEER'S REGISTRATION SEAL OF THE DESIGN ENGINEER.	A M 5605	
SHOP DRAWINGS	A B No. 104	N L
SUBMIT FOR REVIEW TO THE ARCHITECT AND/OR ENGINEER, IN ACCORDANCE WITH THE SPECIFICATIONS, AS FOLLOWS:		
A. PLACING PLANS AND DETAILS OF CONCRETE REINFORCEMENT, IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL (ACI 315).	**************************************	IIIIIIIIIIIIIIII
B. LAYOUT AND DETAILS OF ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL.		
SUBMITTAL SHALL BEAR THE APPROVAL STAMP OF THE CONTRACTOR, VERIFYING THAT THE DIMENSIONS AND DETAILS COMPLY WITH THE CONTRACT DRAWINGS.		
	Z.	
	AILS	Γ N
GORDON L. DAVIS STRUCTURAL ENGINEERING CONSULTANT		
P.O. BOX 241371 MONTGOMERY, ALABAMA 36124-1371		ب ا
(334)213-3070 FAX (334)213-4020		

3	4

	RECEPTACLE LEG
Φ	DUPLEX RECEPTACLE WALL MOUNTED 18" A.F
\bigoplus	DUPLEX RECEPTACLE WALL MOUNTED 6" ACT
\	QUADRAPLEX RECEPTACLE WALL MOUNTED 1
↓ _{WP}	DUPLEX GROUND FAULT CIRCUIT INTERRUPTE A.F.F. TO CENTER UNO. "WP" INDICATES WEAT COVER, DEVICE "WEATHER-RESISTANT" RATE
(\black)	DUPLEX GROUND FAULT CIRCUIT INTERRUPTE A.F.F. TO CENTER UNO.
\bullet	DUPLEX GROUND FAULT CIRCUIT INTERRUPTE OR 48" A.F.F. TO CENTER UNO.

LIGHTING LEGEND

├ xe	4' STRIP LED UNO. SURFACE MOUNTED OR CH TYPE, SEE LUMINAIRE SCHEDULE. THE LETTE EQUIPPED WITH EMERGENCY BATTERY AND/C
H _{XE}	WALL MOUNTED LIGHT FIXTURE. LETTER "X" I SCHEDULE. THE LETTER "E" INDICATES THAT BATTERY AND/OR WIRED AS A NIGHT LIGHT.
⊡ -● _×	POLE MOUNTED LIGHT FIXTURE. LETTER "X" I SCHEDULE.
\overleftrightarrow_{x}	EXIT SIGN WITH BATTERY BACKUP CEILING/W. NUMBER OF FACES. ARROWS AS INDICATED CONDUCTOR FOR 24 HOUR OPERATION. LETT LUMINAIRE SCHEDULE.
×	EMERGENCY LIGHT WITH BATTERY POWER, C "X" INDICATES FIXTURE TYPE, SEE LUMINAIRE
PP	PP-20 POWER PACK 120/277 VAC; 20 AMPS. SE
OCL	CEILING MOUNTED LINE VOLTAGE OCCUPANO MANUFACTURER'S RECOMMENDATIONS.
OC	CEILING MOUNTED LOW VOLTAGE OCCUPANO MANUFACTURER'S RECOMMENDATIONS.

POWER LEGEND

	PANELBOARD, SURFACE MOUNTED.
	PANELBOARD, FLUSH MOUNTED.
×	DISCONNECT SWITCH, NEMA 1, NON-FUSED, S AMP RATING - SEE DISCONNECT SWITCH SCH
×	DISCONNECT SWITCH, NEMA 1, FUSED, SUBSC RATING - SEE DISCONNECT SWITCH SCHEDUL
x	DISCONNECT SWITCH, NEMA 3R, NON-FUSED, AMP RATING - SEE DISCONNECT SWITCH SCH
x	DISCONNECT SWITCH, NEMA 3R, FUSED, SUBS RATING - SEE DISCONNECT SWITCH SCHEDUL
U	JUNCTION BOX CEILING MOUNTED. REFER TO FOR COVER.
	EXISTING PANELBOARD, SURFACE MOUNTED.

	BRANCH CIRCUIT LE
	CONDUIT OR RACEWAY EXPOSED TO VIEW. R STRUCTURE CONCEAL FROM VIEW AS MUCH
	CONDUIT OR RACEWAY EXPOSED TO VIEW. R STRUCTURE CONCEAL FROM VIEW AS MUCH
	CONDUIT OR RACEWAY CONCEALED IN CEILIN
	CONDUIT OR RACEWAY UNDERGROUND OR CO
— — UP — — —	UNDERGROUND PRIMARY.
	UNDERGROUND SECONDARY.
-EOHEOH	OVERHEAD ELECTRICAL CABLE
	PHASE CONDUCTOR, NEUTRAL CONDUCTOR A
	HOMERUN. TICKS INDICATES NUMBER OF CON NEUTRAL, 1 GROUND CONDUCTOR.
~~~	UNDERGROUND HOMERUN. TICKS INDICATES

	SWITCH LEGENI
\$	WALL SWITCH SPST 42" AFF TO CENTER UNO 2
\$A	WALL MOUNTED OCCUPANCY SENSOR SWITCH RECOMMENDATIONS.

D

# **SEND**

- F.F. TO CENTER UNO.
- TO CENTER OR 48" A.F.F. UNO.
- 18" A.F.F. TO CENTER UNO.
- ER (5mA) RECEPTACLE WALL MOUNTED 18" THERPROOF "IN-USE" EXTRA DUTY METAL
- ER (5mA) RECEPTACLE WALL MOUNTED 18"
- ER (5mA) RECEPTACLE WALL MOUNTED 6" ACT

- AIN HUNG. LETTER "X" INDICATES FIXTURE ER "E" INDICATES THAT THE FIXTURE IS OR WIRED AS A NIGHT LIGHT.
- INDICATES FIXTURE TYPE. SEE LUMINAIRE THE FIXTURE IS EQUIPPED WITH EMERGENCY
- INDICATES FIXTURE TYPE, SEE LUMINAIRE
- ALL MOUNTED FILLED IN SECTION INDICATES ON PLANS - PROVIDE UNSWITCHED ER "X" INDICATES FIXTURE TYPE, SEE
- CONNECTED TO UNSWITCHED HOTLEG. LETTER SCHEDULE.
- NSOR SWITCH INC.
- ICY SENSOR. LOCATE ACCORDING TO
- CY SENSOR. LOCATE ACCORDING TO

- SUBSCRIPT INDICATES DISCONNECT SWITCH IEDULE.
- CRIPT INDICATES DISCONNECT SWITCH AMP
- SUBSCRIPT INDICATES DISCONNECT SWITCH IEDULE.
- SCRIPT INDICATES DISCONNECT SWITCH AMP
- SPECIFICATIONS FOR COLOR REQUIREMENTS

# EGEND

- RUN PARALLEL OR PERPENDICULAR TO AS POSSIBLE.
- RUN PARALLEL OR PERPENDICULAR TO
- AS POSSIBLE.
- NG CAVITY OR WALL.
- CONCEALED IN FLOOR SLAB.

AND ISOLATED GROUND CONDUCTOR. NDUCTORS NO TICKS INDICATES 1 PHASE, 1

NUMBER OF CONDUCTORS NO TICKS INDICATES 1 PHASE, 1 NEUTRAL, 1 GROUND CONDUCTOR.

- 20A 120/277V.
- CH. LOCATE ACCORDING TO MANUFACTURER'S

# GENERAL ELECTRICAL NOTES

- THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL LABOR, EQUIPMENT, MATERIALS, AND SUPPLIES AS NECESSARY FOR A NEAT, COMPLETE, AND SATISFACTORY OPERATING ELECTRICAL SYSTEMS WHICH CONFORMS TO ALL LOCAL CODES, PLANS, AND SPECIFICATIONS.
- ELECTRICAL CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS INCLUDING BUT NOT NECESSARILY LIMITED TO ALL CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ENTIRE PROJECT MANUAL. ELECTRICAL CONTRACTOR SHALL ACKNOWLEDGE AND INCLUDE IN THE SCOPE OF WORK (CONTRACT) ALL CONDITIONS PERTINENT TO THE COMPLETION OF THE ELECTRICAL WORK. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ELECTRICAL WORK WITH THE INSTALLATION OF WORK BY ALL OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE INSTALLATION. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE OWNER.
- 3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE, IT SHALL NOT BE THE INTENT OF ISSUED PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL NECESSARY ITEMS FOR A COMPLETE AND OPERATING SYSTEM.
- ALL INSTALLATIONS SHALL CONFORM TO THE LATEST EDITION OF ENFORCED INTERNATIONAL BUILDING CODE AND NFPA-70 AT THE TIME OF PERMIT.
- 5. EACH BIDDER SHALL VISIT THE JOB SITE PRIOR TO BIDDING TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND TO ASCERTAIN THE EXTENT OF WORK REQUIRED. FAILURE TO VISIT SITE SHALL NOT EXCUSE CONTRACTOR FROM PERFORMING REQUIRED WORK NOR SHALL IT BE AN ACCEPTABLE REASON FOR REQUESTING ADDITIONS TO THE CONTRACT.
- 6. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY AN AGENCY SUCH AS UNDERWRITER'S LABORATORIES (UL), ELECTRICAL TESTING LABORATORY (ETL), ETC AND ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. FOR THE USE INTENDED WHERE A STANDARD FOR SUCH MATERIALS AND USE EXISTS. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL AND OF THE SAME MANUFACTURER.
- THE WORD "PROVIDE" MEANS THAT THIS CONTRACTOR SHALL FURNISH, FABRICATE, ERECT, CONNECT, AND COMPLETELY INSTALL SYSTEMS IN PROPER OPERATING CONDITION. ALL LABOR, PRODUCT OPTIONS, ACCESSORIES AND INCIDENTAL MATERIALS REQUIRED SHALL BE INCLUDED AS PART OF THIS WORK TO COMPLETE THE INSTALLATION.
- 8. THE ELECTRICAL DRAWINGS INDICATE REQUIREMENTS OF MECHANICAL/PLUMBING/FIRE PROTECTION/KITCHEN EQUIPMENT BASED ON RESPECTIVE DRAWINGS AND SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL CONNECTIONS PRIOR TO ROUGH-IN USING APPROVED CATALOG SHEETS AND SHOP DRAWINGS. ACTUAL EQUIPMENT SUPPLIED MAY DIFFER, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADE DISCIPLINES TO INSURE ANY CHANGES WILL BE INSTALLED CORRECTLY AT THE EXPENSE OF THE DISCIPLINE RESPONSIBLE MAKING THE CHANGES AND/OR SUBSTITUTIONS THAT VARY FROM THE CONSTRUCTION DOCUMENTS.
- 9. ALL ELECTRICAL CONNECTIONS WILL BE CODE COMPLIANT WITH N.E.C.
- 10. WIRING SYSTEMS SHALL CONSIST OF COPPER WIRING INSTALLED IN CONDUIT, MINIMUM WIRE SIZE SHALL BE #12AWG, MINIMUM CONDUIT SIZE SHALL BE 3/4".
- 11. CONDUCTORS SHALL BE 99% COPPER (NO ALUMINUM CONDUCTORS WILL BE ACCEPTED).
- 12. SUBSURFACE CONDUIT SHALL BE SCHEDULE 40 PVC UNO. FOR RUNS GREATER THAN 50 FEET IN LENGTH, VERTICAL TURN UPS SHALL BE GRS SWEEP 90S WITH A BITUMASTIC COATING UNO.
- 13. CONTRACTOR SHALL REPAIR ANY DISTURBED AREA TO SAME COMPACTION, GRADE, SLOPE, ETC. AS ORIGINAL AREA INCLUDING REPLACEMENT OF SOD, GRASS, ROCK, GRAVEL, RIP-RAP, ETC. TO THE SATISFACTION OF THE OWNER AND ENGINEER.
- 4. CONTRACTOR SHALL REPAIR AND PATCH ALL WALLS, FLOORS, PENETRATIONS, ETC. TO MATCH THE ADJACENT SURFACE WHERE EQUIPMENT IS BEING REMOVED OR IF NECESSARY FOR THE INSTALLATION OF NEW EQUIPMENT UNDER THIS CONTRACT.
- 15. ANY AREA OF CONSTRUCTION DAMAGED DURING THIS CONTRACT SHALL BE REPAIRED TO MATCH ADJACENT SURFACES.
- 16. REMOVE ANY SPILLED DIRT, CONCRETE, ETC. FROM ANY DRIVEWAYS, ROADWAYS OR CONSTRUCTION SITE AS DIRECTED BY ARCHITECTURAL INSPECTOR.
- 17. CLEAN UP ALL DEBRIS AROUND CONSTRUCTION SITE DAILY.
- 18. ELECTRICAL CONTRACTOR SHALL ADJUST WIRE SIZE BASED ON ACTUAL INSTALLATION LENGTH VERSUS DESIGN DISTANCES MAXIMUM ALLOWED VOLTAGE DROP IS 3%.

10

ELECTRICAL AB	BREVIATIONS
A, AMP	AMPERE
ACSR	ALUMINUM CONDUCTOR STEEL-REINFORCED
AF	AMPS FRAME
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CAPACITY (SYM RMS)
AT	AMPS TRIP
EC ELEO	
	ETHYLENE-PROPYLENE RUBBER INSULATION
ER	EXISTING ITEM TO BE REMOVED
EX	EXISTING TO REMAIN
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
GFI	GROUND FAULT INTERRUPTER
G	GROUND
GFE	GOVERNMENT FURNISHED EQUIPMENT
GRS	GALVANIZED RIGID STEEL
HD	HAND DRYER
HP	HORSEPOWER
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
MIN	MINIMUM
N12	NEMA 12 RATED FOR DUST ENCLOSURE
N3R	NEMA 3R RATED FOR EXTERIOR USE
NIC	NOT IN THIS CONTRACT
NL	NIGHT LIGHT
NEC	NATIONAL ELECTRIC CODE
PNL	PANEL
P	POLE
PH	PHASE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
REQD	REQUIRED
RL	EXISTING ITEM TO BE RELOCATED
RU	RACK UNIT
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATIONS
ST	SHUNT TRIP
SWBD	SWITCHBOARD
TFI	TELEPHONE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
#	

![](_page_23_Figure_68.jpeg)

VMOB230004

	l	I		Z		3		4
	1. <u>GEN</u>	IERAL:						REQUIRED. FAILURE TO VISIT
	А.	THE WORK COVER	RED BY THESE SPE	ECIFICATIONS CONSISTS C	F FURNISHING ALL	_		REQUESTING ADDITIONS TO TH
		LABOR, EQUIPMEN	NT, MATERIALS, AN RY OPERATING EL	ND SUPPLIES AS NECESSA ECTRICAL SYSTEMS AS SH	RY FOR THE COMPLETE IOWN ON THE PLANS.	= 2.	RAC	EWAY:
	В.	ALL WORK SHALL	BE IN ACCORDAN	CE WITH THE NATIONAL EL	ECTRICAL CODE, NFPA	 		
		CONTRACTOR SH	CODE, AND ANY O ALL PAY FOR ALL I	I HER LOCAL REQUIREMEN REQUIRED PERMITS, FEES	IS THAT MAY APPLY. INSPECTIONS, ETC.		A.	WESTERN TUBE, OR APPROVE
	C.	CONTRACTOR SH	ALL OBTAIN AND P	AY FOR ALL ELECTRICAL F	PERMITS AND INSPECTI	ON	В.	FOR INTERIOR WORK, CONDUI
	D.	ALL MATERIALS A	ND EQUIPMENT SH	ALL BE NEW AND SHALL B	E LISTED BY THE			AND FOR EXTERIOR WORK WH
		UNDERWRITER'S I	LABORATORIES, IN	IC. OR BY A STATE APPRO	ED THIRD PARTY		0	SUBJECT TO PHYSICAL DAMAG
		AND USE EXISTS.	ALL ITEMS OF TH	E SAME TYPE AND RATING	SHALL BE IDENTICAL A	ND	0.	CONNECTORS SHALL HAVE INS
		OF THE SAME MAN	NUFACTURER.					TYPE FITTINGS ARE NOT ACCE
	<u></u> .	FORMAT (PDF) FO	R ALL ELECTRICAL	LITEMS IN THE SCOPE OF	WORK, INCLUDING, BU	Г	D.	ALL RACEWAY SHALL BE RUN
_		NOT LIMITED TO, F	RACEWAYS, BOXE	S, FITTINGS, CONDUCTORS	S, LUMINAIRES, LAMPS,			OUTLETS IN EXISTING WALLS, SOLIARE
G		PANELBOARDS, S	WITCHBOARDS, SN	WITCHGEARS, MOTOR CON	TROL CENTERS (MCC)	,	E.	RACEWAY PENETRATIONS THE
		BUSWAYS, GENER	RATORS, AUTOMAT	FIC TRANSFER SWITCHES (	ATS), UNINTERRUPTIBL	-E		FILLED WITH IMPERVIOUS, NON TRANSFER OF SMOKE WATER
		DISTRIBUTION CAI	BINETS (FDC/RDC)	, STATIC TRANSFER SWITC	CHES (STS), FIRE ALARN	И,		THE EQUIPMENT ROOF CURB.
		TELECOMMUNICA COMPLETE SET O	TIONS, ETC. FOR A	APPROVAL AS APPLICABLE MITTALS SHALL BE MAINTA	FOR THE PROJECT. O INED AT THE JOB SITE.	NE	F. G.	SUPPORT ALL CONDUIT WITH S
	F.	ALL COST ASSOCI	IATED WITH SUBS	FITUTED EQUIPMENT TO C	OMPLY WITH THE BASIS	6	•	WHETHER EXPOSED OR NOT A
		OF DESIGN, INCLU WIRING. REPLACE	JDING PROVIDING	MAINTENANCE ACCESS, C SYSTEM COMPONENTS. BL	LEARANCE, CONDUIT,		H.	SECURED. WHERE CONDUITS PASS THRC
		METHODS, ETC., S	SHALL BE INCLUDE	D IN THE ORIGINAL BASE	BID. NO ADDITIONAL	•		GALVANIZED EXPANSION FITTI
		HAVE BEEN ACCE	PTED AND ALL CO	STS WILL BE THE RESPON	APPROVED AFTER BID SIBILITY OF THE	5	I. J.	PROVIDE MINIMUM 210# TEST N
		ELECTRICAL CON		TS SHALL BE GIVEN TO THE	OWNER WHERE SUCH	ł	IZ.	RACEWAYS.
F	G.	ONE COMPLETE S	ET OF THE LATES	T CONSTRUCTION PLANS (	)F ALL TRADES SHALL I	BE	ĸ.	EQUIPMENT AND ALL OTHER R
		MAINTAINED AT TH	HE JOB SITE. IN AL	DDITION, ALL ADDENDUMS	BULLETINS, AND/OR			OF 3'-0".
		THE JOB PROGRE	SSES.		STRUCTION FLANS AS		L.	CONNECTION TO LIGHTING FIX
	H.	COMPLETELY ADE	EQUATE HOUSING	SHALL BE PROVIDED FOR	ALL MATERIALS STORE	D	М.	PROVIDE PULL BOXES, SUCH T
		THE GROUND.						WHERE CONDUITS PASS UNDE
	l.	THE CONDUIT AND	D NEUTRAL SYSTE DUNDING FI FCTRO	M SHALL BE GROUNDED A	T THE MAIN SERVICE		N.	ALL CONDUIT BENDS/ELBOWS
	J.	PROVIDE AN INTE	RSYSTEM BONDIN	G TERMINATION DEVICE A	THE MAIN ELECTRICA	L	0.	ALL UNDERGROUND RACEWAY
	K.	SERVICE PER NEC WIRING SHALL BE	C 250.94. TESTED FOR CON	ITINUITY AND GROUNDS B	FORE BEING ENERGIZ	ED.	P.	ALL CONDUITS INSTALLED UNE
		FAULTY WIRING S	HALL BE REPLACE	D AT NO ADDITIONAL EXPE	INSE TO THE OWNER.		0	WATERTIGHT BY USE OF POLY
E	L.	DAMAGE DONE.	TING AND PATCHI	NG FOR INSTALLATION OF	WORK AND REPAIR AN	Y	Q. R.	MC CABLE MAY ONLY BE UTILIZ
	М.		CONTRACTOR SH	ALL CONNECT ALL EQUIPM				ALLOWED WHERE CONCEALED
		WIRING FOR EQUI	PMENT NOT PROV	(IDED BY THE ELECTRICAL	CONTRACTOR. CONTROL	ROL		SHALL NUT BE EXPUSED.
	N	WIRING FOR SUCH	HEQUIPMENT SHA	LL BE PROVIDED BY THE R	ESPECTIVE DISCIPLINE	Ξ. 3.	OUT	LET BOXES:
	IN.	LOW VOLTAGE CA	BINETS, EMERGEN	NCY RECEPTACLES, ETC. S	HALL BE LABELED		Α.	JUNCTION AND PULL BOXES SI
	0.	ACCORDING TO P	ANEL/RACK AND C )N OF WORK. CON	IRCUIT NUMBER. TRACTOR SHALL PRESENT	ENGINEER WITH			MANUFACTURERS SHALL BE S APPLETON (EMERSON). OR AP
		CERTIFICATE OF A	APPROVAL FROM L	OCAL INSPECTOR AND/OF	AUTHORITY HAVING		B.	OUTLET BOXES SHALL NOT BE
	P.	CONTRACTOR SH	ALL GUARANTEE A	ALL WORK AND MATERIALS	FOR A PERIOD OF ONE	Ξ	C. D.	ATTACH EMT WITH CONNECTC ATTACH BOXES TO STUD WOR
		YEAR EFFECTIVE	THE DATE THE PR	OJECT IS ACCEPTED BY TH	E OWNER. ANY		c	ADJACENT STUDS TO PREVEN
D		COST TO THE PRO	DJECT.	ANSHIF SHALL DE REFLAG			с.	COVER PLATES, BLANK IF NOT
	Q.	IT SHALL NOT BE T	THE INTENT OF ISS	SUED PLANS AND/OR SPEC	IFICATIONS TO SHOW		F.	ALL EXTERIOR BOXES SHALL E
		EXPECTED TO FUI	RNISH AND INSTAL	L ALL NECESSARY ITEMS	FOR A COMPLETE AND	4.	CON	DUCTORS:
	R.	OPERATING SYST THE WORD "PROV	EM. (IDE" MEANS THAT	THIS CONTRACTOR SHALL	. FURNISH. FABRICATE		A.	CONDUCTORS SHALL BE MANU
		ERECT, CONNECT	, AND COMPLETEL	Y INSTALL SYSTEMS IN PR	OPER OPERATING	,		(SUPERSLICK), UNITED COPPE
		MATERIALS REQU	IRED SHALL BE IN	CLUDED AS PART OF THIS	ND INCIDENTAL WORK TO COMPLETE T	ΉE	B.	ALL CONDUCTORS SHALL BE C
	c	INSTALLATION.					C	OTHERWISE NOTED OR REQUI
	J. J.	DEFINITION ABOVI	E) ALL DISCONNEC	TING MEANS, OVERCURR	ENT PROTECTION AND		0.	#10 AWG AND SMALLER SHALL
		WIRING REQUIRED		QUIPMENT AND SYSTEMS	IN PROPER OPERATING	3	П	STRANDED.
С	T.	CONTRACTOR SH	ALL COORDINATE	THE ROUGH-IN OF ALL OU	FLET LOCATIONS WITH		_	#14 AWG.
		ARCHITECTURAL	FLOOR PLANS, ELI	EVATIONS, AND MILLWORK	SHOP DRAWINGS PRIC	DR	E.	AND BROWN/ORANGE/YELLOW
	U.	ELECTRICAL CON	TRACTOR SHALL N	IOT SCALE PLANS. CONTR	ACTOR SHALL REFER	ГО IT		RESPECTIVELY. NEUTRAL SHA
		UNLESS OTHERW	ISE NOTED.	TIONS FOR EXACT LOCAT	UNS OF ALL EQUIPMEN	NI,		SYSTEMS. ALL CONDUCTOR S
	V.	IF DURING THE CO		THE CONTRACTOR DISCO	ERS A PROBLEM WITH		F	OF COLORED TAPE ON LARGE
		SPECIFICATIONS,	THE NEC, OR OTH	ER CODES OR REQUIREME	ENTS, THE CONTRACTO	R	1.	CIRCUITS. FIXTURE TAPS SHA
		SHALL IMMEDIATE	ELY BRING THE PRI	OBLEM TO THE ATTENTION			G	GROUNDING CONDUCTOR.
	W.	WHERE THERE AF	RE CONFLICTS BET	WEEN THE PLANS AND SP	ECIFICATIONS, THE		H.	WIRING TO LIGHTING FIXTURE
		CONTRACTOR SHA	ALL BRING THE ISS OR TO THE EXECU	SUE TO THE ATTENTION OF TION OF THE WORK OR OR	F THE ENGINEER FOR DERING ANY MATERIAI	_S.	I.	MULTI-WIRE BRANCH CIRCUITS
B		NO ADDITIONAL C	OSTS SHALL BE W	ARRANTED WITHOUT A CH	ANGE TO THE PROJEC	Т		1) ALL 20A MULTI-WIRE RE
	Х.	THE ELECTRICAL	CONTRACTOR SH	ALL BE RESPONSIBLE FOR	OBTAINING AND		J.	JOINTS IN #10 AWG AND SMALL
			ORARY POWER AN	ID LIGHTING FOR ALL TRAI	DES. AT NO TIME SHALI	L		WITH INSULATING CAPS (NO TAUNDER ANY CONNECTOR OR W
		FROM THE OWNER	R.				• -	BOLTED CLAMPS.
	Y.	COORDINATE LOC POWER COMPANY	ATION AND REQU	IREMENTS FOR ELECTRICA	L SERVICE WITH THE		K.	ALL WIRING LUGS THROUGHOU BREAKERS, PANFI BOARD/SWI
		PROVIDE IDENTIFI	ICATION AT EACH	SERVICE PER NEC 230-2(E)		_		STARTER LUGS, TRANSFORME
	Z.	THE CONTRACTOR	R SHALL PROVIDE	A MINIMUM TWO WEEK NO	ER SHALL BE PROVIDE	:D :D		EQUIPMENT LUGS/TERMINALS CONDUCTORS AT THEIR 75 DF
		PRIOR TO ANY OU	ITAGE. ALL PLANN	IED UTILITY OUTAGES SHA	LL BE COORDINATED			CONDUCTOR SIZE.
		WITH THE OWNER	CIO OCCUR DURIN HOLIDAYS. ALL PL	NG NON-OPERATING TIMES	, INCLUDING NIGHTS, SHALL INCLUDE		L. M.	WIRE WITHIN PANELBOARDS S
A		PROVISIONS FOR	PROPER BACK-UP	OF ALL LIFE-SAFETY SYS	EMS AND INCLUDE AN		N	TAGGED.
	AA.	EACH BIDDER SHA	ALL VISIT THE JOB	SITE PRIOR TO BIDDING TO	AL FIRE MARSHALL. D FAMILIARIZE		IN.	ENCLOSURES THROUGH CONC
		THEMSELVES WIT	H EXISTING COND	ITIONS AND TO ASCERTAIN	THE EXTENT OF WOR	K		TAPS, SHALL INCLUDE GREEN

3

4

T SITE SHALL NOT EXCUSE CONTRACTOR FROM RK NOR SHALL IT BE AN ACCEPTABLE REASON FOR THE CONTRACT.

CTURED BY ALLIED, WHEATLAND, REPUBLIC CONDUIT, ED EQUIVALENT.

JIT SHALL BE ZINC COATED EMT EXCEPT WHERE NOT CHEDULE 40 PVC BELOW CONCRETE SLAB, IN DUCTBANKS, /HERE NOT SUBJECT TO DAMAGE. USE IMC WHERE AGE.

IPRESSION GLAND TYPE, OF MALLEABLE STEEL. NSULATED THROATS. CAST, SET SCREW, OR INDENTER CEPTABLE. ALL FITTINGS FOR EMT SHALL BE MADE OF

N CONCEALED, UNLESS OTHERWISE NOTED. FISH ALL NEW 6, WHERE POSSIBLE. ALL RUNS SHALL BE NEAT AND

ROUGH FLOOR SLABS AND FIRE-RATED WALLS SHALL BE ON-SHRINK GROUT SUFFICIENTLY TIGHT TO PREVENT THE R, AND DUST. ROOF PENETRATIONS SHALL BE WITHIN

I STRAPS AND CLAMPS. PARALLEL OR PERPENDICULAR TO BUILDING LINES, AND SUPPORTED FROM STRUCTURE AND PROPERLY

ROUGH A BUILDING EXPANSION JOINT, PROVIDE

TINGS WITH BONDING JUMPERS. _L BE 3/4" FOR INTERIOR WORK, 1" FOR EXTERIOR WORK. ^ NYLON PULL CORD AND NYLON BUSHINGS IN ALL EMPTY

IT SHALL ONLY BE USED FOR FINAL CONNECTIONS TO ROTATING AND VIBRATING EQUIPMENT, MAXIMUM LENGTH

INIMUM SIZE 1/2", SHALL ONLY BE USED FOR FINAL

IXTURES, MAXIMUM LENGTH OF 6'-0". I THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF SUITABLE AND APPROVED FOR THE INTENDED USE.

DER PAVED AREAS, THEY SHALL BE RGS. 'S EMERGING FROM UNDERGROUND SHALL BE IMC AND

F 18" BELOW GRADE. AYS SHALL BE THOROUGHLY COATED WITH TWO COATS

NDERGROUND OR IN CONCRETE SHALL HAVE JOINTS MADE _YETRA-FLUOROETHYLENE TAPE.

E IS NOT PERMITTED. LIZED WHERE PERMITTED BY CODE AND IT SHALL ONLY BE ED BEHIND HARD WALLS AND HARD CEILINGS. MC CABLE

SHALL BE CODE GAUGE GALVANIZED STEEL. ACCEPTED STEEL CITY (THOMAS & BETTS), RACO, CROUSE-HINDS, APPROVED EQUIVALENT.

BE MOUNTED BACK TO BACK IN COMMON WALLS.

TORS HAVING INSULATED THROAT.

ORK USING CADDY BAR STRAPS THAT CONNECT TO TWO INT TWISTING OF BOX IN WALL. ING TELEPHONE, CABLE TV, AND COMPUTER) SHALL HAVE

T USED. BE WATER-TIGHT.

NUFACTURED BY SOUTHWIRE (SIMPULL), ENCORE PER (SLK), CERRO (SLP), OR APPROVED EQUAL,

IANUFACTURER. COPPER, RATED 75° C WET/DRY EXCEPT WHERE

UIRED BY U.L. OR OTHER CODES.

E SINGLE INSULATED CONDUCTOR, THHN/THWN-2. SIZES LL BE SOLID, SIZES #8 AWG AND LARGER SHALL BE

T BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE

OR CODED BLACK/RED/BLUE FOR 120/208 VOLT SYSTEMS W FOR 277/480 VOLT SYSTEMS FOR A, B, AND C PHASES, HALL BE WHITE FOR 120/208 VOLT SYSTEMS AND NATURAL TEMS. GROUND CONDUCTOR SHALL BE GREEN ON ALL SIZES SHALL HAVE COLOR-CODED INSULATION. THE USE

ER WIRE SIZES SHALL NOT BE ALLOWED. RATED TYPE THHN/THWN-2 FOR FEEDERS AND BRANCH ALL BE #12 THHN/THWN-2 IN FLEX WITH GREEN #12 AWG

IN CONDUIT.

ES SHALL BE AS REQUIRED BY UL LABEL.

IS SHALL NOT BE ALLOWED, UNLESS EXPLICITLY S. WHERE EXPLICITLY INDICATED ON THE DRAWINGS: ECEPTACLE CIRCUITS SHALL UTILIZE A #10 AWG NEUTRAL

LLER SHALL BE MADE UP WITH CRIMPED CONNECTORS TAPE) OR WIRENUTS (MAXIMUM OF 3 CONDUCTORS WIRENUT). LARGER WIRE SHALL USE SPLIT BOLTS OR

OUT THE PROJECT, INCLUDING, BUT NOT LIMITED TO, VITCHBOARD LUGS, SAFETY SWITCH LUGS, MOTOR MERS LUGS, WIRING DEVICE TERMINALS, AND ALL S SHALL BE RATED FOR USE WITH 75 DEGREE INSULATED DEGREE AMPACITY AND SHALL BE SIZED TO MATCH THE

BE MADE ON DEVICE TERMINALS. SHALL BE NEATLY TRAINED, SQUARED, BUNCHED, AND

R NEC ARTICLE 250. BOND WHERE CONDUITS ENTER NCENTRIC KNOCKOUTS. ALL FLEX, INCLUDING FIXTURE N GROUNDING CONDUCTOR, #12 AWG MINIMUM. PROVIDE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT, SIZED

PER NEC 250-127.
O. ALL CONDUCTORS INSTALLED IN VERTICAL RACEWAYS SHALL BE SUPPORTED AT INTERVALS AS REQUIRED PER NEC 300-19.

### . WIRING DEVICES:

A. WIRING DEVICES SHALL BE SPECIFICATION GRADE, MINIMUM, EQUAL TO COOPER QUALITY INDICATED BELOW OR AS MANUFACTURED BY HUBBELL, LEGRAND-PASS & SEYMOUR, LEVITON, OR APPROVED EQUAL, UNLESS OTHERWISE NOTED:

SWITCHES (120/277V) SHALL BE AS FOLLOWS:

SINGLE-POLE 20 AMPCOOPER AH1221DOUBLE-POLE 20 AMPCOOPER AH1222THREE-WAY 20 AMPCOOPER AH1223FOUR-WAY 20 AMPCOOPER AH1224

DUPLEX RECEPTACLES SHALL HAVE A NYLON FACE AND SHALL BE AS FOLLOWS:

15 AMP DUPLEX	COOPER 5252
20 AMP DUPLEX	COOPER 5352
15 AMP DUPLEX GFCI	COOPER VGF15
20 AMP DUPLEX GECL	COOPER VGE20

THE PART NUMBERS ABOVE ARE FOR WIRING DEVICE TYPE ONLY. SEE BELOW FOR WIRING DEVICE COLOR AND PLATE MATERIAL/COLOR.

- B. SEE MOUNTING HEIGHT ELEVATION DETAIL FOR STANDARD MOUNTING HEIGHTS OF ALL DEVICES, UNLESS OTHERWISE NOTED.
- C. ALL WIRING DEVICES (SWITCHES AND RECEPTACLES) SHALL BE GRAY, UNLESS OTHERWISE NOTED. ALL COVER PLATES SHALL BE 302 STAINLESS STEEL. COVER PLATES IN MASONRY WALLS SHALL BE OVERSIZE TYPE. <u>OR</u> ALL WIRING DEVICES (SWITCHES AND RECEPTACLES) AND PLATES SHALL MATCH EXISTING IN MATERIAL AND COLOR, UNLESS OTHERWISE NOTED. COVER PLATES IN MASONRY WALLS SHALL BE JUMBO SIZE. <u>OR</u> THE COLOR OF ALL WIRING DEVICES (SWITCHES AND RECEPTACLES) SHALL BE AS DIRECTED BY THE ARCHITECT, UNLESS OTHERWISE NOTED. ALL COVER PLATES SHALL BE 302 STAINLESS STEEL. COVER PLATES IN MASONRY WALLS SHALL BE JUMBO SIZE.
- D. EACH DUPLEX RECEPTACLE INDICATED TO BE ON A DEDICATED CIRCUIT SHALL BE 20 AMP TYPE.
- E. ADJACENT DEVICES SHALL HAVE A COMMON WALL PLATE.
   F. WEATHERPROOF COVERS SHALL BE "WHILE-IN-USE" EXTRA DUTY METAL COVER SO PLUGS MAY BE INSTALLED WITHOUT COMPROMISING THE WP FUNCTION. COOPER #WIU-2 DOUBLE-GANG WITH CLEAR COVER OR APPROVED EQUAL.
- G. A MAXIMUM OF 10 GENERAL PURPOSE RECEPTACLES SHALL BE ON EACH BRANCH CIRCUIT.
- H. ALL WALL MOUNTED OCCUMPANCY/VACANCY SENSORS/SWITCHES SHALL BE INSTALLED WITH AN EQUIPMENT GROUNDING CONDUCTOR.
- I. GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL SHALL BE PROVIDED IN ALL LOCATIONS PER NEC 210.8. WHERE A DEVICE LOCATION IS NOT ACCESSIBLE, THE GFCI PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING THE DEVICE.

# 6. <u>SUPPORTS:</u>

- A. ALL EQUIPMENT SHALL BE ADEQUATELY SUPPORTED FROM STRUCTURE.
- B. INSERTS IN MASONRY SHALL BE LEAD OR FIBER IN DRILLED HOLES, OR CAST IN PLACE.C. NAILS OR POWDER ACTUATED FASTENERS SHALL NOT BE USED.
- D. EMT/IMC/RGS SUPPORTS SHALL BE A MAXIMUM OF 8'-0" APART AND A MINIMUM OF 3'-0" FROM BOXES.
- E. LIGHTING FIXTURES MOUNTED IN OR ON CEILING SHALL BE SUPPORTED FROM STRUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A MINIMUM OF FOUR WIRES, ONE ATTACHED TO EACH CORNER OF LAY-IN FIXTURES. RECESSED DOWNLIGHT FIXTURES SHALL BE SUPPORTED THE SAME. DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING GRID OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL LAY-IN FIXTURES.

## 7. <u>PAINTING:</u>

- A. SUITABLE FINISH COAT SHALL BE PROVIDED FOR ALL EQUIPMENT. PANEL TUBS, COVERS, ETC. SHALL BE PRIMED AND ENAMELED TO BLEND WITH ADJACENT SURFACES, OR SHALL BE MANUFACTURER'S STANDARD COLOR BAKED ENAMEL FINISH, OR AS DIRECTED BY THE ARCHITECT.
- B. CONTRACTOR TO PAINT WHERE EXISTING EXPOSED PANELBOARDS, SURFACE RACEWAY, SURFACE BOXES, ETC. HAVE BEEN REMOVED DURING THE DEMOLITION PHASE, EITHER FOR TEMPORARY WORK OR PERMANENTLY.

## 3. LIGHTING FIXTURES:

- A. TYPES AND MANUFACTURERS ARE SCHEDULED ON THE PLANS. EQUIVALENT FIXTURES BY OTHERS MAY BE SUBMITTED ONLY AS INDICATED ON THE PLANS AND ARE SUBJECT TO THE APPROVAL OF THE OWNER AND ENGINEER.
- B. ALL FIXTURES SHALL BE U.L. LISTED AND LABELED.
  C. ALL FIXTURES SHALL BE PROVIDED FOR PROPER VOLTAGE BASED ON THE CIRCUIT
- ASSIGNMENT INDICATED ON THE PLANS. D. CATALOG NUMBERS ARE FOR GENERAL IDENTIFICATION OF FIXTURES ONLY. ALL RELATED PARTS, SUCH AS PLASTER RINGS, JUNCTION BOXES, LOUVERS, SHIELDS, MOUNTING STEMS, CANOPIES, CONNECTORS, STRAPS, NIPPLES, HARDWARE, ACCESSORIES, ETC., TO FIT THEM PROPERLY TO THE CONSTRUCTION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. CONTRACTOR SHALL PROVIDE SUITABLE TRIM AND APPURTENANCES TO MOUNT FIXTURES IN TYPE OF CEILING OR WALL AS SPECIFIED IN ARCHITECTURAL FINISH SCHEDULES REGARDLESS OF CATALOG NUMBER GIVEN.
- E. ALL FIXTURES SHALL BE GROUNDED PER THE NEC.
- F. FIXTURES CONNECTED WITH FLEX TO THE RIGID RACEWAY PORTION OF THE WIRING SYSTEM SHALL CARRY A GREEN BONDING JUMPER WITHIN THE FLEX. THE JUMPER SHALL BE FASTENED TO BOTH THE FIXTURE AND THE RACEWAY SYSTEM WITH A STEEL CITY "G" CLIP OR APPROVED EQUIVALENT. PHASE AND GROUND CONDUCTORS RUN IN FLEX SHALL BE #12 AWG MINIMUM. MAXIMUM FLEX LENGTH SHALL BE 6'-0".
  G. MOUNT ALL FIXTURES PLUMB AND SQUARE WITH ROWS ALIGNED.
- H. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF FIXTURES.
  I. CONTRACTOR SHALL COORDINATE FIXTURE TYPE AND TRIM WITH CEILING
- CONSTRUCTION AND ADJUST ACCORDINGLY WITHOUT ADDITIONAL EXPENSE.
- J. ALL LIGHTING FIXTURES SHALL BE THERMALLY PROTECTED PER THE NEC.K. FIXTURES IN CONTACT WITH INSULATION SHALL BE IC RATED.
- LIGHTING CONTROLS:

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A. FURNISH AND INSTALL WHERE SHOWN AN ELECTRONIC TIME CONTROLLER AS MANUFACTURED BY TORK (NSI), PARAGON, INTERMATIC, OR APPROVED EQUAL CONTACTS SHALL BE SPST OR AS INDICATED, RATED 120/277V AT 20A BALLAST LOAD, AND MINIMUM 30,000 SWITCHING CYCLES. PROVIDE WITH THE NUMBER OF CHANNELS INDICATED (MINIMUM 2 CHANNELS) OR AS REQUIRED TO MEET THE INTENT OF THE DRAWINGS. EACH CHANNEL SHALL BE INDIVIDUALLY PROGRAMMABLE WITH 128 ON-OFF OPERATIONS PER WEEK PLUS FOUR SEASONAL SCHEDULES TO MODIFY THE BASIC PROGRAM AND A HOLIDAY SCHEDULE THAT OVERRIDES THE WEEKLY OPERATION. THE CONTROLLER SHALL BE PROVIDED WITH A PHOTOELECTRIC SENSOR, ASTRONOMIC DIAL, AND A BATTERY BACKED-UP, NON-VOLITILE MEMORY FOR SCHEDULES AND TIME CLOCK. B. LIGHTING CONTACTORS SHALL SWITCH LOADS AT THE VOLTAGE AND AMPERE RATING INDICATED AND SHALL HAVE THE NUMBER OF POLES INDICATED ON THE DRAWINGS OR AS REQUIRED. THE CONTACTOR AND CONTACTS SHALL BE CONTINUOUSLY RATED FOR THE LOAD SERVED, INCLUDING TUNGSTEN FILAMENT, INDUCTIVE, AND **HIGH-INRUSH BALLAST LOADS** C. ALL LIGHTING CONTACTORS SHALL BE ELECTRICALLY HELD AND BE INSTALLED IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE NOTED. 10. IDENTIFICATION AND LABELING: A. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT SUPPLIED FOR THE PROJECT, INCLUDING BUT NOT LIMITED TO, WIRING TROUGHS, SAFETY SWITCHES, DISCONNECTS, TRANSFORMERS, PANELBOARDS, SWITCHBOARDS SWITCHGEARS, MOTOR CONTROL CENTERS (MCC), BUSWAYS, GENERATORS, AUTOMATIC TRANSFER SWITCHES (ATS), UNINTERRUPTIBLE POWER SUPPLY (UPS), POWER DISTRIBUTION UNITS (PDU), FLOOR/REMOTE DISTRIBUTION CABINETS (FDC/RDC), STATIC TRANSFER SWITCHES (STS), ETC. NAMEPLATE SHALL INDICATE THE DEVICE NAME, SYSTEM VOLTAGE (VOLTAGE/PHASE/WIRE), AND UPSTREAM DEVICE AND CIRCUIT. PROVIDE NAMEPLATES FOR CIRCUIT BREAKERS IN SWITCHGEARS. SWITCHBOARDS AND DISTRIBUTION PANELS. NAMEPLATE COLORS SHALL BE AS FOLLOWS: В.

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- 120/208V EQUIPMENTBLUE SURFACE WITH WHITE CORE277/480V EQUIPMENTBLACK SURFACE WITH WHITE COREC.NAMEPLATES UP TO 8 SQUARE INCHES SHALL NOT BE LESS THAN 1/16" THICK.
- NAMEPLATES LARGER THAN 8 SQUARE INCHES SHALL NOT LESS THAN 1/8" THICK.
   D. LETTERING HEIGHT SHALL BE 1/2" MINIMUM.
- E. NAMEPLATES SHALL BE ATTACHED WITH SELF-DRILLING/SELF-TAPPING SCREWS, EXCEPT RIVETS SHALL BE USED WHERE END OF SCREW IS NOT PROTECTED. QUANTITY AS FOLLOWS:
  - UP TO 5 SQUARE INCHES:2 SCREWS.
  - 5 TO 12 SQUARE INCHES: 4 SCREWS.
- ABOVE 12 SQUARE INCHES: 6 SCREWS. F. RECEPTACLE DEVICE COVERPLATES AND FURNITURE SYSTEM RECEPTACLES SHALL RECEIVE A LAMINATED LABEL IDENTIFYING THE PANELBOARD AND CIRCUIT NUMBER FROM ITS SOURCE. USE MACHINE PRINTED, PRESSURE SENSITIVE, ABRASION-RESISTANT LABEL TAPE ON FACE OF COVERPLATE. BLACK PRINT TEXT ON CLEAR TAPE ON LIGHT COLORED OR STAINLESS STEEL PLATES AND WHITE PRINT ON CLEAR TAPE ON DARK COLORED PLATES.

### 11. <u>DISCONNECTS:</u>

A. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE IN NEMA 1 ENCLOSURES, UNLESS OTHERWISE NOTED, FUSED OR NON-FUSED AS INDICATED. SWITCHES SHALL HAVE REJECTION-TYPE FUSE CLIPS. SWITCHES SHALL BE BY EATON, SQUARE-D, GENERAL ELECTRIC, OR APPROVED EQUAL. FUSES SHALL BE CLASS RK5, DUAL-ELEMENT, TIME-DELAY WITH INDICATION. A SET OF 3 SPARE FUSES OF EACH SIZE AND TYPE SHALL BE FURNISHED TO THE OWNER.

### 12. <u>PANELBOARDS:</u>

- A. PANELBOARDS SHALL BE PROVIDED AS MANUFACTURED BY EATON, SQUARE-D, GENERAL ELECTRIC, OR APPROVED EQUAL. ALL NEW EQUIPMENT FOR THE PROJECT SHALL BE BY THE SAME MANUFACTURER.
- B. ALL BUSSING, INCLUDING NEUTRAL AND GROUND, SHALL BE COPPER.
  C. ALL BREAKERS SHALL BE AUTOMATIC THERMAL-MAGNETIC TYPE MOLDED CASE BOLT-ON TYPE, CALIBRATED FOR 40 DEGREE C, OR AMBIENT COMPENSATION, UNLESS OTHERWISE NOTED.
- D. PANELS SHALL BE FULLY RATED (AIC). NO SERIES AIC RATINGS ARE ALLOWED.
- E. PANELS SHALL HAVE FULL SIZE EQUIPMENT GROUNDING BARS AND NEUTRAL BARS, EXCEPT WHERE INDICATED TO BE 200%.
- F. ALL PANELBOARD AND BREAKER LUGS SHALL BE SIZED AND RATED PER THE CONDUCTOR SIZE AND MATERIAL.
- G. LIGHTING AND APPLIANCE PANELS (100A-600A) SHALL HAVE FRONT ACCESSIBLE HINGED DOOR-IN-DOOR COVERS WITH DEAD FRONT, SHALL BE 20" WIDE MINIMUM WITH MINIMUM 4" WIDE WIRING GUTTERS.
- H. DISTRIBUTION PANELS (600A-1200A) SHALL HAVE FRONT ACCESSIBLE DEAD FRONT COVERS.
- I. PROVIDE HANDLE LOCK-ON DEVICES FOR ALL CIRCUIT BREAKERS CONNECTED TO EMERGENCY, EXIT, NIGHT LIGHTING, FIRE ALARM, TELEPHONE BOARDS, AND SECURITY SYSTEMS.
- J. BREAKERS USED FOR SWITCHING SHALL BE SWITCHING DUTY (SWD) RATED.
   K. BREAKERS USED FOR HEATING, AIR-CONDITIONING AND/OR REFRIGERATION SHALL BE HACR RATED.
- L. GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL SHALL BE PROVIDED IN ALL LOCATIONS PER NEC 210.8. WHERE A DEVICE LOCATION IS NOT ACCESSIBLE, THE GFCI PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING THE DEVICE.
- M. ALL GROUNDING TERMINAL BUSSES OF PANELBOARDS SERVING THE SAME PATIENT VICINITY SHALL BE BONDED TOGETHER WITH 1#10 AWG GREEN INSULATED COPPER GROUNDING CONDUCTOR. THE CONDUCTOR SHALL BE CONTINUOUS EXCEPT THAT IT MAY BE BROKEN AT THE PANELBOARD GROUND BAR IN ORDER TO TERMINATE.

### 13. DRY-TYPE TRANSFORMERS:

- A. TRANSFORMERS SHALL BE FACTORY-ASSEMBLED, ENERGY EFFICIENT TYPE MEETING NEMA TP-1 STANDARDS AS MANUFACTURED BY EATON, SQUARE-D, GENERAL ELECTRIC, OR APPROVED EQUAL.
- B. TRANSFORMERS SHALL HAVE (2)-2.5% FULL-CAPACITY ABOVE-NORMAL (FCAN) RATED VOLTAGE PRIMARY TAPS AND (4)-2.5% FULL-CAPACITY BELOW-NORMAL (FCBN) RATED VOLTAGE PRIMARY TAPS. MINIMUM.
- C. TRANSFORMER COILS SHALL BE COPPER, CONTINUOUS WOUND CONSTRUCTION, AND IMPREGNATED WITH A NON-HYGROSCOPIC, THERMOSETTING VARNISH. THE PRIMARY WINDINGS SHALL BE ISOLATED AND INSULATED FROM THE SECONDARY WINDING. THE CORE AND COIL ASSEMBLY SHALL BE INTEGRALLY MOUNTED ON VIBRATION ISOLATION SUPPORTS BETWEEN CORE AND COIL ASSEMBLY AND THE BASE OF THE ENCLOSURE.

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I			1	1	2	1	3	4
		D.	THE TRANSFORM	IER INSULATION S	SYSTEM SHALL BE CLASS 2	220 DEGREE C AND		
		E.	TEMPERATURE R THE MAXIMUM TE	RISE OF 115 DEGRE	EE C RISE OVER 40 DEGRI THE TOP OF THE ENCLOSI	EE C AMBIENT. URE SHALL NOT EXCEED	50	
н		F.	DEGREE C RISE ( TRANSFORMER E	OVER 40 DEGREE	C AMBIENT. LL BE VENTILATED AND F.	ABRICATED OF HEAVY		
		0	GAUGE, SHEET S DATA LABEL.			ATTACHED TRANSFORM	ER	
		G.	45 DB FOR 15- 50 DB FOR 51-	-50 KVA -50 KVA -150 KVA	NOF URMERS SHALL NUT E	AGEED.		
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			62 DB FOR 50 ⁴ 64 DB FOR 70 ⁴	1-700 KVA 1-1000 KVA				
		Ц	65 DB FOR 100 66 DB FOR 150 TRANSFORMER (	)1-1500 KVA )1-2000 KVA CONNECTIONS SH			:	
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		J.	PROVIDE MANUF, AND/OR CEILING DRAWINGS.	ACTURER APPRO MOUNTING BRACI	VED AND LISTED WALL BR KETS (150 KVA MAX) WHEF	ACKETS (75 KVA MAX) RE INDICATED ON THE		
	15.	<u>SEI</u>	SMIC:					
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			REQUIREMENTS.					
	16.	<u>ELE</u>	THE ELECTRICAL	CONTRACTOR SE	<u>ER TRADES:</u> HALL CONNECT AND/OR PE	ROVIDE FINAI		
_		7.	CONNECTIONS TO PROJECT, INCLUI PROTECTION ANI	O ALL EQUIPMENT DING BUT NOT LIM D SUPPRESSION, (	SUPPLIED BY OTHERS AF IITED TO, MECHANICAL, PI OWNER FURNISHED, KITC	PPLICABLE TO THE LUMBING, FIRE HEN, LABORATORY, ETC.		
		В.	THE ELECTRICAL ROUGH-IN USING	CONTRACTOR SH APPROVED CATA	HALL COORDINATE ALL CO	DNNECTIONS PRIOR TO DRAWINGS. THE		
E			ELECTRICAL DRA PROTECTION/KIT	WINGS INDICATE CHEN EQUIPMENT	REQUIREMENTS OF MECH	HANICAL/PLUMBING/FIRE DRAWINGS AND		
			CONTRACTOR SH CHANGES WILL B	ALL COORDINATE	E WITH OTHER TRADE DIS RECTLY AT THE EXPENSE	CIPLINES TO INSURE ANY		
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_		C.	ALL DISCONNECT DRAWINGS PRIO INCORRECTLY BE INSTALLED CORF	R TO ORDERING O ECAUSE OF LACK ( RECTLY AT THE EX	PUSE SIZES SHALL BE COO OR INSTALLING. ANY EQUI OF COORDINATION WILL E (PENSE OF THE ELECTRIC	PMENT INSTALLED BE REMOVED AND AL CONTRACTOR.		
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VOLTAGE DROP SCHEDULE           120 VOLT BRANCH CIRCUITS UP TO 8 AMPS           MIRE SIZE AWG           1'         2         120'         #12           121'         -         190'         #10           191'         -         300'         #8           301'         -         470'         #6           VIRE SIZE AWG           120 VOLT BRANCH CIRCUITS 9 AMPS TO 14 AMPS           MIRE SIZE AWG           1'         -         65'         #12           G6'         -         110'         #10           111'         -         170'         #8         -           240 VOLT BRANCH CIRCUITS UP TO 8 AMPS         -         #12         -           CUN DISTANCE IN FEET         WIRE SIZE AWG           240 VOLT BRANCH CIRCUITS UP TO 8 AMPS         -         #12           CUN DISTANCE IN FEET         WIRE SIZE AWG           1'         -         225'         #12           CUN DISTANCE IN FEET         WIRE SIZE AWG           1'         -         225'         #12           Si55'         #10 <th <="" colspan="2" th=""><th></th><th></th><th>I</th><th>5</th></th>	<th></th> <th></th> <th>I</th> <th>5</th>				I	5
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171'       -       270'       #6         240 VOLT BRANCH CIRCUITS UP TO 8 AMPS         RUN DISTANCE IN FEET       WIRE SIZE AWG         1'       -       225'       #12         226'       -       355'       #10         356'       -       575'       #8	111'	-	170'	#8		
240 VOLT BRANCH CIRCUITS UP TO 8 AMPS         WIRE SIZE AWG         1'       -       225'       #12         226'       -       355'       #10         356'       -       575'       #8	171'	-	270'	#6		
RUN DISTANCE IN FEET       WIRE SIZE AWG         1'       -       225'       #12         226'       -       355'       #10         356'       -       575'       #8	240 VC	OLT BR	ANCH CIRCUITS UP	TO 8 AMPS		
1'     -     225'     #12       226'     -     355'     #10       356'     -     575'     #8	<u>RUN D</u>	ISTAN	CE IN FEET	WIRE SIZE AWG		
226' - 355' #10 356' - 575' #8	1'	-	225'	#12		
356' - 575' #8	226'	-	355'	#10		
	356'	-	575'	#8		
576' - 915' #6	576'	-	915'	#6		

ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

VOLTAGE DROP SCHEDULE 120 VOLT BRANCH CIRCUITS UP TO 4 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG 1' - 225' 226' - 360' 361' - 525' #12 #10 #8 526' - 800' #6 240 VOLT BRANCH CIRCUITS UP TO 14 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG 1' - 450' #12 451' - 725' #10 726' - 1150' #8 1151' - 1800' #6 240 VOLT BRANCH CIRCUITS UP TO 8 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG 1' - 225' #12 226' - 355' 356' - 575' #10 #8 576' - 915' #6 THIS SCHEDULE DICTATES THE MINIMUM WIRE SIZE FOR THE ENTIRE LENGTH OF HOMERUN AND/OR BRANCH CIRCUIT SHOWN FOR THIS DRAWING SET. CONTRACTOR

SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN

AS INDICATED IN SCHEDULE ABOVE.

6

1

VOLTAGE DROP SCHEDULE 120 VOLT BRANCH CIRCUITS UP TO 8 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG #12 1' - 120' 121' - 190' #10 191' - 300' #8 301' - 470' #6 120 VOLT BRANCH CIRCUITS 9 AMPS TO 14 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG 1' - 65' #12 66' - 110' #10 111' - 170' #8 171' - 270' #6 277 VOLT BRANCH CIRCUITS UP TO 14 AMPS RUN DISTANCE IN FEET WIRE SIZE AWG 1' - 145' #12 146' - 235' #10 236' - 380' #8 381' - 600' #6 THIS SCHEDULE SHALL DICTATE THE MINIMUM WIRE SIZE FOR ANY HOMERUN OR BRANCH CIRCUIT FOR THIS DRAWING SET. CONTRACTOR SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

7

8

VOLTAGE DROP SCHEDULE					
120 VOL	T BRAN	ICH CIRCUITS UP TO 8 AMF	PS		
RUN DIS	TANCE	IN FEET	WIRE SIZE AWG		
1' 121' 191' 301'	- - -	120' 190' 300' 470'	#12 #10 #8 #6		
120 VOL	T BRAN	ICH CIRCUITS 9 AMPS TO 1	14 AMPS		
RUN DIS	TANCE	IN FEET	WIRE SIZE AWG		
1' 66' 111' 171'	- - -	65' 110' 170' 270'	#12 #10 #8 #6		
277 VOL	T BRAN	ICH CIRCUITS UP TO 8 AME	PS		
RUN DIS	TANCE	IN FEET	WIRE SIZE AWG		
1' 261' 411' 661'	- - -	260' 410' 660' 1050'	#12 #10 #8 #6		
277 VOLT BRANCH CIRCUITS UP TO 14 AMPS					
RUN DIS	RUN DISTANCE IN FEET WIRE SIZE AWG				
1' 146' 236' 381'	- - -	145' 235' 380' 600'	#12 #10 #8 #6		

THIS SCHEDULE SHALL DICTATE THE MINIMUM WIRE SIZE FOR ANY HOMERUN OR BRANCH CIRCUIT FOR THIS
DRAWING SET. CONTRACTOR SHALL UPSIZE WIRES BASED
ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE
ABOVE.

![](_page_25_Figure_7.jpeg)

+	1 2 3		I	4
	SECTION 26 56 68 - EXTERIOR ATHLETIC LIGHTING		a. Remote drivers and	d supp
	Lighting System with LED Light Source		grade in aluminum indicator lights on f	enclos uses to
	PART 1 - GENERAL		for each pole struct b. Manufacturer shall	ture wi provid
Н	1.1 <u>SUMMARY</u>		ground (Common N	Mode) with a
	A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.		trouble-free installation.	nd cro
	B. The purpose of these specifications is to define the lighting system performance and design standards for Integrity Park Soccer Fields using an LED Lighting source. The manufacturer / contractor shall supply lighting		aiming alignment.	de rem
_	equipment to meet or exceed the standards set forth in these specifications.		system. See Section 2.3	3 for fu
	1. (3) Soccer Fields		96A. a Integrated groundir	na via d
	D. The primary goals of this sports lighting project are:		b. If grounding is not i	integra
			required by NFPA	780.Th 1m of 1
G	<ol> <li>Guaranteed Light Levels: Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Therefore light levels are guaranteed to not drop below specified target values for a period of 25 years.</li> </ol>		a grounding electro or less, and 2/0 AV	ode coi VG for
	<ol> <li>Environmental Light Control: It is the primary goal of this project to minimize spill light to adjoining properties and glare to the players, spectators and neighbors</li> </ol>		D. Safety: All system compor	nents s
	<ol> <li>Cost of Ownership: In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate. All maintenance costs shall be eliminated for the duration of the</li> </ol>	2.2	A Electric Power Requireme	nte for
_	warranty.		1. Electric power: 208 Vol	t, 1 Ph
	facility, customer requires a remote on/off control system for the lighting system. Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All communication and monitoring costs for		2. Maximum total voltage three (3) percent of the	drop: \ rated
	<ul><li>25-year period shall be included in the bid.</li><li>a. Control and monitoring system shall provide contactor control of all existing circuits. Key switches shall</li></ul>		B. Energy Consumption: The	kW co
_	be provided to provide field-level control of existing circuit groups.	2.3	CONTROL	
F	1.2 ONFIELD LIGHTING PERFORMANCE		A. Instant On/Off Capabilities	: Syste
	A. Illumination Levels and Design Factors: Playing surfaces shall be lit to an average target illumination level and uniformity as specified in the chart below. Lighting manufacturers will provide a guarantee that light levels will be avertised even the life of the warranty period. Lighting calculations about the developed and field.		B. Lighting contactor cabinet( contactors, labeled to mate	(s) con ch fielc
	measurements taken on the grid spacing with the minimum number of grid points specified below.		C. Contactor control of lights:	To m
_	Manufacturers will provide lumen maintenance data of the LED luminaires used per TM-21-11 and will Incorporate the lumen maintenance projections Into the lighting designs to ensure target light levels are achieved throughout the guaranteed period of the system. Per JES guidelines, lumen maintenance hours		from turning on due to con driver output to zero.	nmunio
	should be reported based on the 6x multiplier of testing hours.		D. Dimming: System shall pro options (Website, app, pho	ovide fe one, fa
	Average Target         Maximum to           Area of Lighting         Illumination         Minimum         Grid Points         Grid Spacing		E. Remote Lighting Control S	System
	LevelsUniformity RatioField 130 foot-candles2.5:19630' x 30'		maintain a two-way TCP/IF support and assist with reg	P com porting
E	Field 2         30 foot-candles         2.5:1         96         30' x 30'           Field 3         30 foot-candles         2.5:1         96         30' x 30'		The owner may assign ve	arious s
	B. Color Temperature: The lighting system shall have a minimum color temperature of 5700K and a CRI of 75+.		to execute "early off" com	mands
	C. Playability: Lighting design and luminaire selection should be optimized for playability by reducing glare onfield and providing sufficient uplight.		Controller shall accept an and shall reboot once pov	d store ver is r
_	1 Aiming Angles: To reduce glore, luminoire ciming cheuld ensure the ten of the luminoire field angle (based		F. Remote Monitoring System luminaire outage is detected	n: Syst ed so t
	on sample photometric reports) is a minimum of 10 degrees below horizontal.		switch position (manual or	auto)
	<ol> <li>Charle Control Technology - Ediminaries selected should have grate control technology including, but not limited to: external visors, internal shields and louvres. No symmetrical beam patterns are acceptable.</li> <li>Mounting Heights: To oppure proper ciming angles, minimum mountings heights shall be as described.</li> </ol>		G. Management Tools: Manu and provide reports by fac	facture ilitv an
	below. Higher mounting heights may be necessary for luminaire with lesser glare control to meet field angle requirements of section 1.2.C.1.		control operation and serv devices.	ice. Mo
D	# of Poles Pole Designation Pole Height		Hours of Usage: Manufac system that is readily acc	turer s essible
	12 S1-S12 70'		1. Cumulative hours: shall	l be tra
	<ul> <li>1.3 <u>ENVIRONMENTAL LIGHT CONTROL</u></li> <li>A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited</li> </ul>		<ol> <li>Report hours saved by</li> <li>Communication Costs: Ma</li> </ol>	using on the second sec
_	to, internal shields, louvers and external shields. No symmetrical beam patterns are accepted.		system for a period of 25 y	/ears. aire dr
	A. Manufacturer shall submit a 25-year Cost of Ownership summary that includes energy consumption,	2.4	enclosures by means of po	owerlin
	anticipated maintenance costs, and control costs. All costs associated with faulty luminaire replacement - equipment rentals, removal and installation labor, and shipping - are to be included in the maintenance costs.	2.4	A. Wind Loads: Wind loads s	hall be
	PART 2 - PRODUCT		using ASCE 7-16, an ultim	ate de
C	2.1 SPORTS LIGHTING SYSTEM CONSTRUCTION		B. Pole Structural Design: In Standard Specification for	e stres Struct
	A. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaires, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired and tested.		C. Foundation Design: The fo material as defined by 202	oundati 21 IBC
	B. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help		D. Foundation Drawings: Proj the project is located are r	ject sp equire
_	shall be powder coated with high performance polyester or anodized. All exterior reflective inserts shall be anodized, coated, and protected from direct environmental exposure to prevent reflective degradation or		axial (vertical) force at grou accurate pricing.	und lev
	corrosion. All exposed hardware and fasteners shall be stainless steel, passivated and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking.	PAR	T 3 - EXECUTION	
	Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms,	3.1	SOIL QUALITY CONTROL	respo
	C. System Description: Lighting system shall consist of the following:		the foundation design is ba request / estimate for the (	ased, c Owner'
В	<ol> <li>Galvanized steel poles and cross-arm assembly. Alternate: Concrete pole with a minimum of 8,000 psi and installed with concrete backfill will be an acceptable alternative provided building code, wind speed and</li> </ol>		<ol> <li>Providing engineered for soils other than specific</li> </ol>	oundati
	foundation designs per specifications are adhered to.		2. Additional materials rec	quired 1
	a. Square static cast concrete poles will not be accepted.	3.2	3. Excavation and remova	il of ma
	b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation will not be accepted due to potential for internal and external corrosive reaction to the soils and long term		A. Delivery Timing Equipmen	t On-S
	3. Lighting systems shall use concrete foundations. See Section 2.4 for details.		edominano and receipt of C	ompie
	a. For a foundation using a pre-stressed concrete base embedded in concrete backfill the concrete shall be air-entrained and have a minimum compressive design strength at 28 days of 3,000 PSI. 3,000 PSI	3.3	FIELD QUALITY CONTROL	
	concrete specified for early pole erection, actual required minimum allowable concrete strength is 1,000 PSI. All piers and concrete backfill must bear on and against firm undisturbed soil.		A. IIIUmination Measurements Project Engineer, Owner's shall be taken and verified	s: Upol Repre
A	b. For anchor bolt foundations or foundations using a pre-stressed concrete base in a suspended pier or reinforced pier design pole erection may occur after 7 days. Or after a concrete sample from the same		RP-6-22.	
	batch achieves a certain strength. 4. Manufacturer will supply all drivers and supporting electrical equipment		<ul><li>B. ⊢ield Light Level Accounta</li><li>1. Light levels are guarant</li></ul>	ibility teed no
			-	

porting electrical equipment shall be mounted approximately 10 feet above osures. The enclosures shall be touch-safe and include drivers and fusing with to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit will be located in the enclosure. Integral drivers are not allowed.

ide surge protection at the pole equal to or greater than 40 kA for each line to ) as recommended by IEEE C62.41.2_2002. an abrasion protection sleeve, strain relief and plug-in connections for fast,

# oss-arm assemblies shall withstand 150 mi/h winds and maintain luminaire

mote on-off control, monitoring, and entertainment features of the lighting further details.

ghtning grounding as defined by NFPA 780 and be UL Listed per UL 96 and UL **3.4** 

a concrete encased electrode grounding system.

rated into the structure, the manufacturer shall supply grounding electrodes, s, and exothermic weld kits. Electrodes and conductors shall be sized as The grounding electrode shall be minimum size of 5/8 inch diameter and 8 feet 10 feet embedment. Grounding electrode shall be connected to the structure by onductor with a minimum size of 2 AWG for poles with 75 feet mounting height or poles with more than 75 feet mounting height.

shall be UL listed for the appropriate application.

### or the Sports Lighting Equipment:

hase - Soccer Field 1, 480 Volt, 3 Phase - Soccer Fields 2 & 3 Voltage drop to the disconnect switch located on the poles shall not exceed l voltage.

consumption for the field lighting system shall be 75.12 kW.

### stem shall provide for instant on/off of luminaires.

onstructed of NEMA Type 4 aluminum, designed for easy installation with Id diagrams and electrical design. Manual off-on-auto selector switches shall be

ninimize wear on drivers and other electrical components and prevent lights ication loss, circuits must be controlled via contactor switching, not dimming

for 3-stage dimming (high-medium-low). Dimming will be set via scheduling fax, email).

: System shall allow owner and users with a security code to schedule on/off , phone, fax or email up to ten years in advance. Manufacturer shall provide and munication link. Trained staff shall be available 24/7 to provide scheduling g needs.

security levels to schedulers by function and/or fields. This function must be ileges such as full scheduling capabilities for all fields to only having permission che Is by phone. Scheduling tool shall be capable of setting curfew limits.

re 7-day schedules, be protected against memory loss during power outages, regained and execute any commands that would have occurred during outage.

stem shall monitor lighting performance and notify manufacturer if individual that appropriate maintenance can be scheduled. The controller shall determine ) and contactor status (open or closed).

rer shall provide a web-based database and dashboard tool of actual field usage nd user group. Dashboard shall also show current status of luminaire outages, Mobile application will be provided suitable for IOS, Android and Blackberry

shall provide a means of tracking actual hours of usage for the field lighting le to the owner.

racked to show the total hours used by the facility

g early off and push buttons by users.

cturer shall include communication costs for operating the control and monitoring

drivers: Control system shall interface with drivers in electrical components ine communication.

e based on the 2021 International Building Code. Wind loads to be calculated lesign wind speed of 115mph and exposure category C.

ess analysis and safety factor of the poles shall conform to 2013 AASHTO ctural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-6).

ation design shall be based on soils that meet or exceed those of a Class 5 Table 1806.2.

pecific foundation drawings stamped by a registered engineer in the state where ed. The foundation drawings must list the moment, shear (horizontal) force, and evel for each pole. These drawings must be submitted at time of bid to allow for

onsibility to notify the Owner if soil conditions exist other than those on which , or if the soil cannot be readily excavated. Contractor may issue a change order r's approval / payment for additional costs associated with:

ation embedment design by a registered engineer in the State of Alabama for il conditions;

to achieve alternate foundation;

naterials other than normal soils, such as rock, caliche, etc.

Site: The equipment must be on-site 10-12 weeks from receipt of approved lete order information.

on substantial completion of the project and in the presence of the Contractor, esentative, and Manufacturer's Representative, illumination measurements e illumination measurements shall be conducted in accordance with IESNA

not to fall below the target maintained light levels for the entire warranty period

6 7 8

4.1

	6		7	8			9	1	10		
C.	of 25 the m 2. The c lightin 3. The c back dama Correctin performa the perfor adjustme	years. These lev anufacturer. contractor/manufa ction of the syste ng. contractor/manufa to compliance for uge to the fields d ang Non-Conforma ance levels includ ormance specifica ents to meet spec	rels will be specifically stated as "guaranteed" on the acturer shall be responsible for conducting initial light, in the presence of the owner, one year from the acturer will be held responsible for any and all chain r light levels and uniformities. Contractor/Manufacturing these repairs.	he illumination summary provided l ght level testing and an additional e date of commissioning of the nges needed to bring these fields turer will be held responsible for ar ed Representative, the actual onformance with the requirements of er shall be required to make	by ny of						
4 <u>W</u> / A.	ARRANT 25-Year from the specifica cover we unauthou	Warranty: Each date of shipmen ally funded financ eather conditions rized repairs or a	<b>NTEE</b> manufacturer shall supply a signed warranty cove t. Warranty shall guarantee specified light levels. I ial reserves to assure fulfillment of the warranty for events such as lightning or hail damage, imprope Iterations, or product made by other manufacturer	ring the entire system for 25 years Manufacturer shall maintain or the full term. Warranty does not or installation, vandalism or abuse, rs.	-						<b>D</b>
В.	Maintena of usage covered impacted labor, sh of a lumi	ance: Manufactur and luminaire of such that individ d. Manufacturer is hipping, and equip inaire outage.	rer shall monitor the performance of the lighting sy utage for 25 years from the date of equipment shi ual luminaire outages will be repaired when the us s responsible for removal and replacement of faile oment rental associated with maintenance. Owner	vstem, including on/off status, hour oment. Parts and labor shall be sage of any field is materially ed luminaires, including all parts, agrees to check fuses in the even	s t					200	
ART 4	- DESIG	N APPROVAL								uite	
A.	Design A manufac requirem approval	Approval: The ow cturers to ensure nents of the speci I for the specific o	DIREMENTS (Non-Musco) oner / engineer will review pre-bid submittals per se compliance to the specification 10 days prior to bi ifications, a letter and/or addendum will be issued design submitted.	ection 4.1.B from all the d. If the design meets the design to the manufacturer indicating						hase Lane, Si	3200 3200 rk.com
B. C.	Approve substitut end of th specifica manufac All listed	ed Product: Musc ions must provid- nis section at leas ation may be requ turers and design manufacturers r	o's Light-Structure System M with TLC for LED ¹ is e a complete submittal package for approval as or at 10 days prior to bid. Special manufacturing to m uired. An addendum will be issued prior to bid listin ns. not pre-approved shall submit the information at th	e end of this section at least 10 da	he ys					2660 East C	<b>Т 334.271.</b> GMCNETWC
D.	prior to c method f Bidders owner oi	to be used. are required to bi r owner's represe	n will be issued prior to bid; listing approved lightin id only products that have been approved by this s entative. Bids received that do not utilize an approv	ng manufacturers and the design specification or addendum by the ved system/design, will be rejected	l.						
REQUI l items quirem <b>ecklis</b>	RED SU listed be ents. Co t below	BMITTAL INFOF elow are mandato omplete the Yes/I with submittal.	RMATION FOR ALL MANUFACTURERS (NOT P TO BID bry, shall comply with the specification and be sub No column to indicate compliance (Y) or noncomp	<b>RE-APPROVED) 10 DAYS PRIOD</b> mitted according to pre-bid submite liance (N) for each item. <b>Submit</b>	<b>R</b> tal					UE DATE RID 12.06.2023	D BY: JEA
Yes / No	Tab A B	Item Letter/ Checklist Equipment Layout	Description Listing of all information being submitted must be name of the manufacturer's local representative a checklist to be included. Drawing(s) showing field layouts with pole locatio	included on the table of contents. and his/her phone number. Signed ns	List the submittal					ISSUED FOF	DESIGNED DRAWN CHECKED
	с	On Field Lighting Design	<ul> <li>Lighting design drawing(s) showing:</li> <li>a. Field Name, date, file number, prepared by</li> <li>b. Outline of field(s) being lighted, as well as porthe field (x &amp; y), Illuminance levels at grid s</li> <li>c. Pole height, number of fixtures per pole, horizas luminaire information including wattage,</li> <li>d. Height of light test meter above field surface.</li> <li>e. Summary table showing the number and sparmaximum illuminance levels in foot candles minimum ratio, coefficient of variance (CV), gradient; number of luminaries, total kilowa</li> </ul>	le locations referenced to the cente pacing specified zontal and vertical aiming angles, a lumens and optics cing of grid points; average, minim (fc); uniformity including maximum coefficient of utilization (CU) unifo tts, average tilt factor; light loss fac inaire types being proposed showi	er of as well um and n to rmity tor.						
	D	Photometric Report	candela tabulations as defined by IESNA Publica certified by laboratory with current National Volum	tion LM-35-02. Photometric data sl Itary Laboratory Accreditation Prog	nall be ram or						
	E	Performance Guarantee	Provide performance guarantee including a writter required to meet the performance requirements in to the owner. Light levels must be guaranteed to period. Pole structural calculations and foundation design requirements, repar and anchor bolts (if required)	n commitment to undertake all com oted in these specifications at no e not fall below target levels for warra n showing foundation shape, depth	rections expense anty backfill					H FORT R FIELD	230047
	F G	Calculations Control & Monitoring System	shown on the foundation drawing along with soil stamped by a structural engineer in the state of A Manufacturer of the control and monitoring system schematics for automated control system. They v	bearing pressures. Design must be labama. m shall provide written definition an vill also provide ten (10) references e state of Alabama	id of					SPANIS	CMOB2
	н	Electrical Distribution Plans Warranty	Manufacturer bidding an alternate product must in including changes to service entrance, panels an Electrical Engineer in the state of Alabama. Provide written warranty information including all references of customers currently under specified	nclude a revised electrical distributi d wire sizing, signed by a licensed terms and conditions. Provide ten (	on plan (10)					A REAL PROPERTY	**************************************
	J	Project References Product	Manufacturer to provide a list of ten (10) projects proposed for this project has been installed in the include project name, project city, installation date contact phone number.	where the technology and specific state of Alabama. Reference list w e, and if requested, contact name a	fixture vill and					A A A	No. 26967 ROFESSIONAL 12.6.2025 A G I N E C R A V E R R HHHHHHHH
	К	Information Deliverv	Manufacturer shall supply an expected delivery ti	meframe from receipt of approved							
	M	Non- Compliance Cost of Ownership	Submittals and complete order information. Manufacturer shall list all items that do not complete tab may be omitted. Document cost of ownership as defined in the spooperating the luminaires. Maintenance cost for the	y with the specifications. If in full co ecification. Identify energy costs for e system must be included. All cos	ompliance r ts should					- Alexandre	HIIIIIIIIIIIIIIIIIIIIII
	<u> </u>	- -	LUE DASEU ON 25 YEARS							ELECTRICAL SPECIFICATIONS	GE0.04
									/MOB230004		
	6		7	8		1	9	1	10		

![](_page_27_Figure_0.jpeg)

- KEYED NOTES #
- 1. ALL WORK ASSOCIATED WITH BASKETBALL COURT LIGHTING WILL BE ALTERNATE #1.
- 2. ALL WORK ASSOCIATED WITH EXISTING SOCCER FIELD (SHOWN AS FIELD #1) LIGHTING WILL BE ALTERNATE #2.
- 3. APPROXIMATE LOCATION OF WELL PUMP TO BE RELOCATED INTO VAULT BELOW GRADE. RELOCATE ELECTRICAL COMPONENTS ASSOCIATED WITH WELL PUMP TO EXTERIOR OF EXISTING BUILDING, PROVIDE ALLOWANCE OF \$15,000.00 FOR ELECTRICAL RELOCATION.
- 4. APPROXIMATE LOCATION OF PORTABLE RESTROOM FACILITY. ELECTRICAL CONTRACTOR WILL INCLUDE AN ALLOWANCE OF \$10,000.00 FOR ELECTRICAL CONNECTION TO SAME FOR A FULLY FUNCTIONAL, PROPERLY OPERATING FACILITY.
- 5. RELOCATED ELECTRICAL EQUIPMENT.
- 6. APPROXIMATE LOCATION OF FUTURE SIGNAGE BY OWNER - VERIFY PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR WILL INCLUDE A \$8,000.00 ALLOWANCE FOR THE INSTALLATION OF A MINIMUM OF 4 SIGN LIGHTS COMPLETE AS REQUIRED FOR A FULLY FUNCTIONAL PROPERLY OPERATING SYSTEM FED FROM PANEL 'LNA'.
- 7. APPROXIMATE LOCATION OF RELOCATED WELL EQUIPMENT.

![](_page_27_Figure_11.jpeg)

Scale: 1" = 70'

![](_page_28_Figure_0.jpeg)

- KEYED NOTES #: 1. NEW UTILITY/STORAGE BUILDING.
- 2. APPROXIMATE LOCATION OF PANEL 'NF'.
- 3. UTILITY CO. METER.
- 4. APPROXIMATE LOCATION OF NEW UTILITY CO. PADMOUNTED TRANSFORMER.
- 5. UNDERGROUND PRIMARY BY UTILITY CO. -SEE RISER DIAGRAM.
- 6. APPROXIMATE LOCATION OF UTILITY CO. RISER POLE.
- 7. UNDERGROUND SECONDARY SEE RISER DIAGRAM.
- 8. APPROXIMATE LOCATION OF EXISTING PANEL 'LPB'. (ALTERNATE #2).
- 9. CUT AND PATCH EXISTING CONCRETE AS REQUIRED FOR INSTALLATION OF CONDUITS FOR SOCCER FIELD #1 LIGHTING. CONCRETE MUST BE SAW CUT AND PATCHED TO MATCH EXISTING. (ALTERNATE #2).

![](_page_28_Figure_12.jpeg)

![](_page_28_Figure_13.jpeg)

![](_page_28_Figure_14.jpeg)

![](_page_28_Figure_15.jpeg)

![](_page_28_Figure_16.jpeg)

![](_page_28_Picture_17.jpeg)

![](_page_28_Picture_18.jpeg)

OVERALL ELECTRIC SITE PLAN

9

![](_page_29_Figure_0.jpeg)

![](_page_29_Figure_1.jpeg)

 $\langle 1 \rangle$ 

THRU RELAY 'A4'.

THRU RELAY 'A2'.2. LNF-10,12 THRU RELAY CONTROL PANEL 'A', CIRCUIT 10 THRU RELAY 'A3' AND CIRCUIT 12

10

- LNF-14,16 THRU RELAY CONTROL PANEL 'A', CIRCUIT 14 THRU RELAY 'A5' AND CIRCUIT 16 THRU RELAY 'A6'.
- 4. LNF-18 THRU RELAY 'A7' IN RELAY CONTROL PANEL 'A'.
- 5. LNF-20,22 THRU RELAY CONTROL PANEL 'A', CIRCUIT 20 THRU RELAY 'A8', CIRCUIT 22 THRU RELAY 'A9'.
- 6. LNF-24 THRU RELAY 'A10' IN RELAY CONTROL PANEL 'A'.
- INF-26,28 THRU RELAY CONTROL PANEL 'A', CIRCUIT 26 THRU RELAY 'A11', CIRCUIT 28 THRU RELAY 'A12'.
- 8. EXISTING LIGHTING STANDARD SHOWN FOR REFERENCE ONLY - NO WORK REQUIRED.

![](_page_29_Figure_9.jpeg)

Scale: 1" = 30'

10

VMOB230004

![](_page_30_Figure_0.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)

![](_page_33_Figure_2.jpeg)

![](_page_34_Figure_0.jpeg)

![](_page_35_Figure_0.jpeg)

![](_page_36_Figure_0.jpeg)

![](_page_37_Figure_0.jpeg)

			PANEL W	ORKING SPA	ACES
				MINIMUM CLEAR DISTANCE	
ſ	-4" WIDE YELLOW	GROUND	CONDITION 1	CONDITION 2	CONDITION 3
	AND BLACK HAZARD STRIPE	0-150	3'-0"	3'-0"	3'-0"
	BLACK LETTERING OVER YELLOW BACKGROUND	151-600	3'-0"	3'-6"	4'-0"
DO NOT BLOCK FLOOR		NOTE: WHERE THE CO · <u>CONDITION</u> GROUNDE BOTH SIDE	ONDITIONS ARE AS FOLLOW <u>1 1</u> - EXPOSED LIVE PARTS ( D PARTS ON THE OTHER SII S OF THE WORKING SPACE	VS: ON ONE SIDE OF THE WORKIN DE OF THE WORKING SPACE, E THAT ARE EFFECTIVELY GUA	G SPACE AND NO LIVE OR OR EXPOSED LIVE PARTS ON ARDED BY INSULATING

![](_page_38_Figure_0.jpeg)

![](_page_39_Figure_0.jpeg)

![](_page_40_Figure_0.jpeg)

112.50

150

T5

T6

175A

225A

135A

180A

312A

415A

3#2/0 & 1#6G - 2"C

3#4/0 & 1#4G - 2-1/2"C

400A

500A

COPPER	SYMBOL	COPPER
MCM & 1#4(G) - 3"C	600 4G	2 PARALLEL RUNS OF 4#350MCM & 1#1(G) - 3"C
MCM & 1#4(G) - 3"C	800 4G	2 PARALLEL RUNS OF 4#600MCM & 1#1/0(G) - 4"C
MCM & 1#4(G) - 3"C	4G	3 PARALLEL RUNS OF 4#500MCM & 1#2/0(G) - 3 1/2"C
MCM & 1#3(G) - 3"C	4G	3 PARALLEL RUNS OF 4#600MCM & 1#3/0(G) - 4"C
MCM & 1#3(G) - 3 1/2"C	4G	4 PARALLEL RUNS OF 4#600MCM & 1#4/0(G) - 4"C
MCM & 1#3(G) - 3 1/2"C		
MCM & 1#3(G) - 4"C		
RALLEL RUNS OF MCM & 1#2(G) - 3"C		

Secondary Feeder
4#4 & 1#8G - 1-1/4"C
4#1 & 1#6G - 1-1/2"C
4#1/0 & 1#6G - 2"C
4#250MCM & 1#2G - 2-1/2"C
2(4#3/0, 1#1/0G - 2-1/2"C) OR 4#600MCM
2(4#250MCM, 1#1/0G - 2-1/2"C)

CONDUCTOR TABLE									
SIZE OF LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS (AWG/kcmil)	SIZE OF GROUNDING ELECTRODE CONDUCTOR (AWG/kcmil)								
COPPER	COPPER								
2 OR SMALLER	8								
1 OR 1/0	6								
2/0 OR 3/0	4								
OVER 3/0 THROUGH 350	2								
OVER 350 THROUGH 600	1/0								
OVER 600 THROUGH 1100	2/0								
OVER 1100	3/0								
NOTES: 1. WHERE MULTIPLE SETS	OF SERVICE-ENTRANCE								

10

+	1 2	3		I			4	
	PANEL BOARD NOTES							
	1. PANELBOARDS SHALL BE INSTALLED IN SUCH A MANNER TO MAINTAIN ALL CLEARAN	ICES IN		LO	CATION	UTILITY/S	TT STORAGE BL	JILDI
	<ol> <li>PANELBOARDS SHALL BE INSTALLED IN SUCH A MANNER TO MAINTAIN ALL CLEARAN ACCORDANCE WITH THE NEC.</li> <li>ALL PANELBOARDS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THA</li> <li>PANELBOARDS SHALL BE FURNISHED COMPLETE WITH THE PROPERLY SIZED CAN, I HARDWARE, COMPONENTS, SUPPORTING STRUCTURES, ETC., FOR A COMPLETE INS</li> <li>FURNISH EACH PANELBOARD WITH A GROUND BAR BONDED TO THE PANEL ENCLOS</li> <li>EACH PANELBOARD SHALL HAVE A NAMEPLATE AS SHOWN IN DETAIL. ENGINEER WI ACCEPT JOB UNTIL THESE NAMEPLATES ARE PROVIDED.</li> <li>ALL FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH AT LEAST SIX 3/4" S CONDUITS TO ABOVE ACCESSIBLE CEILING.</li> <li>ALL PANELBOARDS SHALL BE CLEARLY MARKED TO COMPLY WITH NEC 110.16 &amp; NEG REGARDING POTENTIAL HAZARDS OF ARC FLASH.</li> <li>PROVIDE TYPED CIRCUIT DIRECTORY THAT INDICATES WHAT EACH CIRCUIT IS SERV AND RECEPTACLE CIRCUITS WILL INCLUDE THE ROOM NUMBERS THAT CIRCUIT IS SERV AND RECEPTACLE CIRCUITS WILL INCLUDE THE ROOM NUMBERS THAT CIRCUIT IS SERV AND RECEPTACLE CIRCUITS WILL INCLUDE THE ROOM NUMBERS THAT CIRCUIT IS SERV AND RECEPTACLE FEEDERS ARE USED) FOR THE NUMBER AND SIZE CIRCUITS INDIC/</li> <li>THE TERMINATION POINT OF THE FEEDER SERVING EACH ASSEMBLY SHALL BE AT T POINT OF FEEDERE SARE USED) FOR THE NUMBER AND SIZE CIRCUITS INDIC/</li> <li>THE TERMINATION POINT OF THE FEEDER SERVING EACH ASSEMBLY SHALL BE AT T POINT OF FEEDER ENTRY TO MINIMIZE CONDUCTOR FILL IN THE CAN. COORDINATE FED PANELBOARDS SHALL BE DOOR-IN-DOOR CONSTRUCTION.</li> <li>AMANUFACTURER THAT WILL BE PROVIDING PANELBOARDS ON THIS PROJECT WILL 1 BREAKER COORDINATION TO ENSURE DOWNSTREAM CIRCUIT BREAKERS TRIP BEF( DREAKER DADA DREAKERS TRIP BEF()</li> </ol>	AT LISTIN NTERNA STALLATI SURE. LL NOT PARE C110.24 /ING. LIG ERVING. E ACCEP TPLE LUC ATED. THE NEAF TOP/BOT	G. L ON. HTING TED.) GS REST TOM DO A TREAM	LOU VO TRI Ck # 1 3 5 7 9 1 ¹ 1 ⁵ 1 ⁵ 1 ⁷ 1 ⁵ 2 ⁷ 2 ⁹ 2 ¹ 1 ⁷ 1 ⁵ 2 ⁷ 2 ⁹ 2 ¹ 2 ¹ 2 ¹ 2 ¹ 2 ¹ 2 ¹ 2 ¹ 3 ³ 3 ⁵ 3 ⁵ 3 ⁵ 3 ⁵ 3 ⁵ 3 ⁵ 3 ⁵	CATION LTAGE M (T AV AV AV AV AV AV AV AV AV AV AV AV AV	UTILITY/S 277/480 SURFAC LC DESC AILABLE B AILABLE C COLE 'P1'/CC DLE 'P1'/CC	TORAGE BL E DAD RIPTION USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA USSED SPA ONTACTOR '( RMER 'TLNF' KVA)	
	BREAKERS. PROVIDE BREAKER COORDINATION STUDY IN THE SHOP DRAWINGS FOR REVIEW.	RENGIN	EER	<u>NO</u> G - C -	TES: INDICATE INDICATE	ES CLASS ( ES LOCK-O	a gfci type N Clip for	E CIR CIRC
		FIXTURE	NO	LA	MPS		VOLTAGE	MC
		EM	1	1	LED	1000	UNV	
		EMX	1	17	LED	1000	UNV	
		FS8	1	48	LED	10,000	UNV	
		OA	1	180	LED	21321	UNV	
		OB	1	720	LED	21321 EA.	UNV	
		WA	1	20	LED	2150	UNV	
			1	4.12	LED	500	UNV	
		<u>Mounting</u> Ag - At GF BAM - BRAC P - Pole M PT - Post RC - Rece LUMINAIRE 1. Equivai QUALITY, F	LEGEND ADE CKET AB CKET WAL IOUNTED TOP SSED CE SSED CE SSED CE	DVE L LING <u>LE NOTE</u> DUCTS \ ALITY, S	RW - RE S - SUSF SC - SUF SW - SU UNV - UN <u>SS:</u> MILL BE F HAPE, LU	CESSED V PENDED RFACE CEI RFACE WA IVERSAL REVIEWED IMEN OUTF	VALL LING ALL PROVIDED	THE
		2. ELECTRI 3. IN ORDE REPRESEN REQUIREM 4. ALL EME 5. SOME LI	CAL CON R TO ENS NTATIVE A ENT WILL ERGENCY STED CA	TRACTOF SURE PR ND DIST . BE REJ AND EXI TALOG N	r IS Resi oper CC Ributor Ected W It Lights UMBERS	PONSIBLE ORDINATIONS LOCATEI (ITHOUT RE WILL BE O MAY INCL	FOR COORD ON AND LON D WITHIN ON EVIEW. THE CONNECTED	INAT G TE IE HL CON TO L CATI
		6. ANY ANI	D ALL DIM	ENSION		RENCES M	UST BE COC	
					ROOI           RELA           A1           A2           A3           A4           A5           A6           A7           A8           A9           A10           A11           A12           NOTES           1	VI: Y VOLT 120 120 120 120 120 120 120 120	. CIRCUIT LNF-6 LNF-8 LNF-10 LNF-12 LNF-14 LNF-16 LNF-18 LNF-20 LNF-22 LNF-24 LNF-24 LNF-28	
					NOTES SYSTE SHOP BEGIN	m Will Be Drawing. Ning Roug	PROVIDED MANUFACTI 3H-IN.	AS A UREF

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# **PANELBOARD SCHEDULE:**

5

ORAGE BUILDING	3	MAIN:	225A	MCB								
		SYSTEM:	3ø, 4 W	IRE								
INTERRUPTING RATING: 22K AIC 100% RATED MCB												
D	BR	E <mark>AK</mark> ER	PF	ASE (kV	A)	PF	IASE (kV	A)	BREAKER	2	LOAD	CKT
PTION	Ρ	TRIP	A	В	С	Α	В	С	TRIP	Ρ	DESCRIPTION	#
SED SPACE						3.47						2
SED SPACE							3.47		30	3	POLE 'S2'/CONTACTOR 'C2'	4
SED SPACE								3.47				6
SED SPACE						3.47						8
SED SPACE							3.47		30	3	POLE 'S3'/CONTACTOR 'C3'	10
SED SPACE								3.47				12
SED SPACE						3.47						14
SED SPACE							3.47		30	3	POLE 'S4'/CONTACTOR 'C4'	16
SED SPACE								3.47				18
			2.25			3.47						20
TACTOR 'C1'	1	30		2.25			3.47		30	3	POLE 'S5'/CONTACTOR 'C5'	22
					2.25			3.47				24
			2.25			3.47						26
TACTOR 'C2'	1	30		2.25			3.47		30	3	POLE 'S6'/CONTACTOR 'C6'	28
					2.25			3.47				30
ER 'TI NE'			10.00			3.47						32
	3	50		10.00			3.47		30	3	POLE 'S7'/CONTACTOR 'C7'	34
7.9					10.00			3.47				36
			3.47			3.47						38
TACTOR 'C1'	3	30		3.47			3.47		30	3	POLE 'S8'/CONTACTOR 'C8'	40
					3.47			3.47				42

	EX	Ρ	AN	EL	BO	AF	RD	SC	HE	EDU	JL	.E: LPB	
LOCA	TION EX. UTIL. STORAGE BLDG		MAIN:	100A	MCB							SERVICE ENTRANCE RATED	
VOLT/	AGE 120/208		SYSTEM	: 3ø, 4 W	/IRE								
TRIM	SURFACE		INTERRU	PTING R	ating:		10K	AIC					
CKT	LOAD	BR	EAKER	PI	HASE (k\	/A)	PI	HASE (k\	/A)	BREAKE	R	LOAD	CKT
#	DESCRIPTION	Ρ	TRIP	A	В	С	Α	B	С	TRIP	Ρ	DESCRIPTION	#
1	RECEPTACLES	1	20	0.40			1.20			20	1	EF-3	2
3	RECEPTACLES	1	20		0.40			0.24		20	1	IRRIGATION CONTROLLER 'B'	4
5	RECEPTACLES	1	20			0.40				20	1	SPARE	6
7	RECEPTACLES	1	20	0.40						20	1	SPARE	8
9	RECEPTACLES	1	20		0.40					20	1	SPARE	10
11	RECEPTACLES	1	20			0.40				20	1	SPARE	12
13	RECEPTACLES	1	20	0.70						20	1	SPARE	14
15	RECEPTACLES	1	20		0.70					20	1	SPARE	16
17	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	18
19	AVAILABLE BUSSED SPACE						2.15						20
21	AVAILABLE BUSSED SPACE							2.15		30	3	POLE 'S9'/CONTACTOR 'C1'	22
23	AVAILABLE BUSSED SPACE								2.15				24
25	AVAILABLE BUSSED SPACE						2.15						26
27	AVAILABLE BUSSED SPACE							2.15		30	3	POLE 'S10'/CONTACTOR 'C2'	28
29	AVAILABLE BUSSED SPACE								2.15				30
31	AVAILABLE BUSSED SPACE						2.15						32
33	AVAILABLE BUSSED SPACE							2.15		30	3	POLE 'S11'/CONTACTOR 'C3'	34
35	AVAILABLE BUSSED SPACE								2.15				36
37	AVAILABLE BUSSED SPACE						2.15						38
39	AVAILABLE BUSSED SPACE							2.15		30	3	POLE 'S12'/CONTACTOR 'C4'	40
41	AVAILABLE BUSSED SPACE								2 15				42

NF

NOTES: G - INDICATES CLASS A GFCI TYPE CIRCUIT BREAKER C - INDICATES LOCK-ON CLIP FOR CIRCUIT BREAKER. BOLD, ITALIC TEXT INDICATES NEW WORK.

### YPE CIRCUIT BREAKER OR CIRCUIT BREAKER.

LUMINAIRE SCHEDULE MOUNTING MAKE MODEL DESCRIPTION TYPE WHITE THERMOPLASTIC, DUAL-HEAD LED EMERGENCY LIGHT, CU2 SW COMPASS DAMP LOCATION LISTED. CUSO DB SW COMPASS DARK BRONZE LED FIXTURE WITH PHOTO-CELL. COLUMBIA LCL-8-35-ML-E-U 8' LED STRIP. SC LIGHTING SINGLE HEAD FIXTURE ON A 25' POLE. VIPER W/18L TYPE IV-F VP-ST-2-72-L-180-4K7-4F BEACON P CLEAR ACYLIC OPTICS. FOUR HEAD FIXTURE ON A 25' POLE. VIPER W/18L TYPE IV-F VP-ST-2-72-L-180-4K7-4F BEACON P CLEAR ACYLIC OPTICS. SW HUBBELL

TRP1-12L-20-4K7-3-U-DB WALLPACK, BRONZE WITH INTEGRAL BATTERY BACKUP. WHITE THERMOPLASTIC, COMBINATION EXIT/EMERGENCY SC COMPASS CCR LIGHT, UNIVERSAL FACE, RED LETTERS.

4

ED THE REQUIREMENTS FOR PRIOR APPROVAL OUTLINED IN THE SPECIFICATIONS ARE MET AND MUST MEET OR EXCEED OF PRODUCT LISTED BY CATALOG NUMBER.

DRDINATING ALL FIXTURE MOUNTING PROVISIONS WITH THE ASSOCIATED CEILING TYPE(S) BEFORE ORDERING FIXTURES. LONG TERM SUPPORT FOR THE OWNER, ALL LIGHTING FIXTURES WILL BE PURCHASED THROUGH A MANUFACTURER'S I ONE HUNDRED AND FIFTY (150)MILES OF THE PROJECT SITE. SUBMITTALS RECEIVED THAT DO NOT COMPLY WITH THIS THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DELAYS CAUSED BY NON-COMPLIANCE WITH THIS REQUIREMENT. TED TO UNSWITCHED HOT LEG SO THAT BATTERY OPERATES UPON POWER FAILURE.

DIFICATIONS OF A MANUFACTURER'S STANDARD PRODUCT.

COORDINATED PRIOR TO RELEASE OF ORDER.

	RELAY CONTROL PANEL	SCHEDULE	'A'			
			CON	ITRO	L	
CIRCUIT	DESCRIPTION	SW INPUTS	TIMERS	NOTE	BUTTON	SW TYPE
LNF-6	SITE LIGHTING		Y	1		
LNF-8	SITE LIGHTING		Y	1		
LNF-10	SITE LIGHTING		Y	1		
LNF-12	SITE LIGHTING		Y	1		
LNF-14	SITE LIGHTING		Y	1		
LNF-16	SITE LIGHTING		Y	1		

LNF-18	SITE LIGHTING		Y	1						
LNF-20	SITE LIGHTING		Y	1						
LNF-22	SITE LIGHTING		Y	1						
LNF-24	SITE LIGHTING		Y	1						
LNF-26	SITE LIGHTING		Y	1						
LNF-28	SITE LIGHTING		Y	1						
-OFF.										
ROVIDED	OVIDED AS A COMPLETE OPERATING SYSTEM, AS PER DESIGN INTENT AND MANUFACTURER'S									
NUFACTL	IRER'S SHOP DRAWINGS MUST BE S	UBMITTED AN	D APPRO	/ED PR	IOR TO					

	NEW	Ρ	AN	EL	BC	<b>AF</b>	<b>RD</b>	SC	HE	EDU	JL	.E: LNF	
LOCAT	ION UTILITY/STORAGE BUILDIN	G	MAIN:	100A	MCB								
VOLTA	GE 120/208		SYSTEM	: 3ø, 4 W	/IRE								
TRIM	SURFACE		INTERRU	PTING R	ATING:		10K	AIC				100% RATED MCB	,
CKT	LOAD	BR	EAKER	P	HASE (k)	/A)	P	HASE (k)	/A)	BREAKE	R	LOAD	CK
#	DESCRIPTION	Ρ	TRIP	Α	B	C	Α	В	С	TRIP	Ρ	DESCRIPTION	#
1	RECEPTACLES	1	20	0.40			0.80			20	1	LIGHTING	2
3	RECEPTACLES	1	20		0.40			0.50		20	1	LIGHTING	4
5	RECEPTACLES	1	20			0.40			1.00	20	1	SITE LIGHTING	6
7	RECEPTACLES	1	20	0.40			0.80			20	1	SITE LIGHTING	8
9	RECEPTACLES	1	20		0.40			0.80		20	1	SITE LIGHTING	10
11	RECEPTACLES	1	20			0.40			0.80	20	1	SITE LIGHTING	12
13	SPARE	1	20				0.80			20	1	SITE LIGHTING	14
15	SPARE	1	20					0.80		20	1	SITE LIGHTING	16
17	SPARE	1	20						0.80	20	1	SITE LIGHTING	18
19	SPARE	1	20				0.80			20	1	SITE LIGHTING	20
21	SPARE	1	20					0.80		20	1	SITE LIGHTING	22
23	SPARE	1	20						0.80	20	1	SITE LIGHTING	24
25	AVAILABLE BUSSED SPACE						1.00			20	1	SITE LIGHTING	26
27	AVAILABLE BUSSED SPACE							0.80		20	1	SITE LIGHTING	28
29	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	30
31	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	32
33	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	34
35	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	36
37	AVAILABLE BUSSED SPACE											AVAILABLE BUSSED SPACE	38
39	AVAILABLE BUSSED SPACE							1.00		30	2	SCOPEROAPD	40
41	AVAILABLE BUSSED SPACE								1.00	30		JUUKEBUAKD	42

NUIES

7

G - INDICATES CLASS A GFCI TYPE CIRCUIT BREAKER C - INDICATES LOCK-ON CLIP FOR CIRCUIT BREAKER.

				IRCUIT SUMMA	RY BY SWITCH			
SWITCH	ZONE DESCRIPTION	POLE ID	QTY OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CABINET #	CONTACTOR ID	PANEL/BREAKER
1	SOCCER 1	<b>S</b> 9	4	17.98	30	1	C1	LPB-20,22,24
1	SOCCER 1	S10	4	17.98	30	1	C2	LPB-26,28,30
1	SOCCER 1	S11	4	17.98	30	1	C3	LPB-32,34,36
1	SOCCER 1	S12	4	17.98	30	1	C4	LPB-38,40,42

			C	IRCUIT SUMMA	RY BY SWITCH			
SWITCH	ZONE DESCRIPTION	POLE ID	QTY OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CABINET #	CONTACTOR ID	PANEL/BREAKER
1	SOCCER 2	<b>S1</b>	5	12.57	30	2	C1	NF-37,39,41
1	SOCCER 2	S2	5	12.57	30	2	C2	NF-2,4,6
1	SOCCER 2	S3	5	12.57	30	2	C3	NF-8,10,12
1	SOCCER 2	S4	5	12.57	30	2	C4	NF-14,16,18
2	SOCCER 3	S5	5	12.57	30	2	C5	NF-20,22,24
2	SOCCER 3	S6	5	12.57	30	2	C6	NF-26,28,30
2	SOCCER 3	S7	5	12.57	30	2	C7	NF-32,34,36
2	SOCCER 3	S8	5	12.57	30	2	C8	NF-38,40,42

		C	IRCUIT SUMMA	RY BY SWITCH				
SWITCH	ZONE DESCRIPTION	POLE ID	QTY OF	FULL LOAD AMPS	CONTACTOR SIZE	CABINET #	CONTACTOR ID	PANEL/BREAKER
3	BASKETBALL 1	P1	2	5.53	30	3	C1	NF-19,21,23
3	BASKETBALL 2	P2	2	5.53	30	3	C2	NF-25,27,29

### DANEL DOADD COUCDILLE.

10

![](_page_41_Figure_28.jpeg)

![](_page_42_Figure_0.jpeg)

![](_page_43_Figure_0.jpeg)

![](_page_44_Figure_0.jpeg)

8 9 10 11 12 13 14 15 16 17 This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.

	14		15		10	<b> </b> _	I	/		
SPORT	S SCHEDUL	.E								
SYMBOL	DESCRIPTION			QTY	DETAIL					
SP-102	NATURAL TURF	SOCCER FIELD	; 4" SAND	87,399 SF	1/SF4.00					
SP-103	REGULATION SC MODEL #SG824F SPECIALTIES AS	CCER GOAL; Y R BY SPORTSFIE BASIS OF DES	outh Eld Ign	2	2/SF4.00					
SP-104	SOCCER FIELD O GOAL OFFICAL F FLAGS FOR HIG	CORNER FLAGS REGULATION CO H SCHOOL AND	3 ; KWIK DRNER	4	3/SF4.00					
	COLLEGE AS BA	SIS OF DESIGN								
MISC S	DESCRIPTION	NTS		QTY	DETAIL					
Z-101	FIELD LIGHTING	G BY MUSCO; S RAWINGS	SEE							
NOTE SCHEI FIELD, MULT	DULE QUANTIT AND NOT REFL IPLE FIELDS/CC	IES REPRESEN ECT QUANT OURTS	IT QUAN ITIES FOR	TITIES FOI	R EACH RE SITE OR		11 North Water Street	Suite 15250 Mobile Al 36602	T 251.460.4006	GMCNETWORK.COM
							DATE 12 06 2023	0.101.0		AF JBB
							ISSUE E			VN BY: ,
								=		DRAV CHECK
							CITY OF SPANISH FORT SPANISH FORT. ALABAMA			
							* RECEICACO		ALADER ER APE	Children + M
		0' 20					SOCCER FIELD			00.710

![](_page_45_Figure_0.jpeg)

![](_page_45_Figure_2.jpeg)

This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.

![](_page_46_Figure_0.jpeg)

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![](_page_47_Picture_0.jpeg)

![](_page_48_Figure_0.jpeg)

![](_page_48_Figure_6.jpeg)

![](_page_49_Figure_0.jpeg)

![](_page_49_Figure_2.jpeg)

![](_page_50_Figure_0.jpeg)

DRAWING FILE: L:\Mobile\+PROJECT FOLDERS\2023\LMOB230008 Integrity Park Phase II\03 Construction Drawings - Specs\01_Primary\LMOB230008 - PLANTING.c

![](_page_51_Figure_0.jpeg)

This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.

![](_page_52_Figure_0.jpeg)

7	8	9	10	l 11	12

8 9 10 11 12 13 14 15 16 17 This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.

I.

13 14 15 16

![](_page_52_Figure_9.jpeg)

ES INDICATED TO REMAIN SHALL BE PROTECTED WITH FENCING AT THE LIMITS OF THE GREATER OF FITHER THE ORITICAL				
OT ZONE OR CANOPY DRIP-LINE UNLESS OTHERWISE INDICATED IN THE DRAWINGS.				
THE CRITICAL ROOT ZONE SHALL BE DETERMINED BY MULTIPLYING THE DBH(IN FEET) BY 1.5 AND RADIATING OUT FROM THE TREE TRUNK. TORE GRADING/CONSTRUCTION REGINS, THE CONTRACTOR SHALL CALL THE LANDSCAPE ARCHITECT FOR REVIEW OF TREE	CODE QTY COMMON / BOTANICAL NAME	CAL. / I	<u>HT.  </u>	
	TREES       TAX DIS     15       BALD CYPRESS / TAXODIUM DISTICHUM	2.0" CA	L.	
EE PROTECTION ZONES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE NDSCAPE ARCHITECT. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS OR STAGING, TRAFFIC, BURIAL S. TRENCHING, OR OTHER LAND DISTURBING ACTIVITY IS ALLOWED IN THE TREE PROTECTION ZONE UNLESS AUTHORIZED.	JUN BR214BRODIE EASTERN REDCEDAR / JUNIPERUS VIRQUE VIR3SOUTHERN LIVE OAK / QUERCUS VIRGINIANA	GINIANA 'BRODIE' 10-12` H A 2.0" CA	IT	
WRITING BY THE LANDSCAPE ARCHITECT	QUE PHE 59 WILLOW OAK / QUERCUS PHELLOS	2.0" CA	L.	
EES THAT ARE DAMAGED WITHIN THE BOUNDARIES OF THE TREE PROTECTION ZONE SHALL BE EVALUATED BY AN BORIST OR FORESTER FROM THE JURISDICTION HAVING AUTHORITY AT NO EXPENSE TO OWNER. BASED ON THE ALLIATION, THE TREE MAY BE APPRAISED BY THE LANDSCAPE ARCHITECT USING THE "TRUNK FORMULA METHOD". & THE	CODE QTY COMMON / BOTANICAL NAME	SIZE		
LUE OF THE TREE SHALL BE CREDITED TO THE OWNER.	SHRUBS			
ORDINATE WITH CITY FORESTER PRIOR TO CONDUCTING ANY TREE REMOVAL OR PRUNING. EES INDICATED FOR REMOVAL SHALL ALSO INCLUDE REMOVAL OF STUMP AND ROOTS AND FILLING IN DEPRESSION WITH		SINICKOFTTELA JAPONICA WINTER GLIVI 5 GAL		
TABLE SOIL INFILL.	CODE  QTY  COMMON / BOTANICAL NAME	TYPE	SPACING	
	CYN TI3 211,739 SF TIF 419 BERMUDAGRASS / CYNODON DACTY	'LON 'TIF 419' SOD		
NT NAMES MAY BE ABBREVIATED ON DRAWINGS. REFER TO PLANT SCHEDULE FOR ABBREVIATIONS, BOTANICAL & COMMON				
MES, SIZES, ESTIMATED QUANTITIES AND OTHER REMARKS. NTRACTOR SHALL VERIEV THE TOTAL QUANTITIES INDICATED IN THE PLANT LIST WITH THE QUANTITIES SHOWN ON THE				
N. CONTRACTOR SHALL PROVIDE QUANTITIES REQUIRED TO COMPLETE PROPOSED PLANTING AS INDICATED ON THE PLAN.				
NTRACTOR SHALL GIVE THE LANDSCAPE ARCHITECT THE OPPORTUNITY TO TAG & REVIEW TREES IN THE NURSERY OR HELD DR TO DIGGING.				
PLANT/ROOTBALL SIZES & THE METHOD OF DETERMINING TREE CALIPER SHALL CONFORM TO THE RECOMMENDATIONS OF E LATEST EDITION OF ANSI Z60.1 - AMERICAN STANDARD FOR NURSERY STOCK.			JK.	NOTES:
Y & ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PURCHASE & INSTALLATION.			JIN HE	1. REMOVE
LANDSCAPE ARCHITECT MAY REJECT ANY PLANT AT ANY TIME UNTIL THE END OF THE WARRANTY PERIOD. PLANTS THAT IVED A PRIOR APPROVAL ARE NOT EXCLUDED FROM REJECTION AT A LATER DATE. GROUNDS FOR REJECTION INCLUDE		LONG EDGE OF SOD AGAINST	V XLEIF	ROOT BA 2. REMOVE
are not limited to: ION-CONFORMANCE WITH CRITERIA DESCRIBED IN PLANT SCHEDULE.		VERTICAL STRUCTURES.		
THE PRESENCE, EVIDENCE, OR DAMAGE FROM DISEASE, INSECTS/PESTS, EGGS, & LARVAE.		STAGGER JOINTS.		- INTO SOI
jirdled & Kinked Roots, cracked/broken Root Balls, mechanically damaged Roots. Broken Limbs, included bark, or evidence of mechanical injury.				3. TREES PC HAVE MU
LANTS THAT ARE NOT FULL/DENSE, WELL BRANCHED, OR SYMMETRICAL UNLESS IT IS UNCHARACTERISTIC OF SPECIFIED PECIES.	PLAN VIEW - TYPICAL CONDITIONS	PERPENDICULAR TO SLOPE, LAID		<
PLANTS DETERMINED AT THE DISCRETION OF THE LANDSCAPE ARCHITECT TO BE AESTHETICALLY DEAD WHERE APPROXIMATELY 25% OR MORE OF THE PLANT IS SHOWING SIGNS OF DEATH/DIEBACK.		BEGINNING AT LOWEST ELEVATION.		
SHIPMENT TO THE SITE IN UNCOVERED VEHICLES/TRAILERS REGARDLESS OF SEASON.				ROOT FL FINISHED
SS EXPLICITLY DESIGNATED FOR PROTECTION.				SOIL BER
DUT ALL TREES & BED-LINES AS INDICATED IN THE LANDSCAPE DRAWINGS AND RECEIVE APPROVAL FROM THE LANDSCAPE HITECT PRIOR TO INSTALLATION. LAYOUT SHALL BE DONE WITH HIGH VISIBILITY FLAGS AND/OR WOODEN STAKES &		SOD.		ROOTBA
NES SHALL BE LAID OUT WITH MARKING PAINT. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE LAYOUT STMENTS AS NECESSARY AT NO ADDITIONAL COST TO OWNER . NOTIFY LANDSCAPE ARCHITECT OF CONTEMPLATED		PLANTING SOIL.		
STMENTS TO THE LAYOUT & RECEIVE APPROVAL PRIOR TO COMMENCING WITH ADJUSTMENT. DT INSTALL PLANTS IN SATURATED OR FROZEN CONDITIONS. DO NOT INSTALL PLANTS DURING INCLEMENT WEATHER.			FINISHED	
L PLANTS PLUMB & TURNED SO THAT THE MOST ATTRACTIVE SIDE IS MOST COMMONLY VIEWED. MAINTAIN IN PLUMB		LOOSEN SUBGRADE & SCARIFY	GRADE	
ION THROUGHOUT WARRANTY PERIOD. PLANTING BEDS AND TREES SHALL BE MULCHED WITH 3-4 IN. OF SETTLED PINE STRAW THAT IS FREE FROM DEBRIS, LEAVES,		DRAGGING TEETH OF BUCKET.		PIT.
IGS, INSECTS, GRASSES, WEEDS, PLANTS AND THEIR SEEDS, AND ANY SUBSTANCE HARMFUL TO PLANT GROWTH. PINE NAW MULCH SHALL BE TUCKED & ROLLED AT ALL EDGES.				
TREES PLACED IN SODDED/TURFGRASS AREAS SHALL BE MULCHED WITH AN 8 FT. DIAMETER MULCH RING UNLESS OTHERWISE NOTED ON PLANS.			→ 3X DIA. OF ROOT BALL —	ROOT BA
NTRACTOR TO PROVIDE INTERIM MAINTENANCE UNTIL SUBSTANTIAL COMPLETION NOTICE IS PROVIDED BY THE NDSCAPE ARCHITECT. THIS INCLUDES:				SUBGRAD
WATERING	$\int \frac{3000 \text{ INSI ALLA HON}}{1.1/2" = 1'-0"}$		$\sum_{3/8"} = 1'-0"$	
MOWING, TRIMMING, EDGING, BLOWING & WEEDING. FERTILIZING & APPLICATION OF NECESSARY INSECTICIDES/HERBICIDES				
GUYING TREES WHEN DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.				
ADEQUATE DRAINAGE OF PONDING AREAS. GENERAL LANDSCAPE CLEAN-UP.				
NTING SOIL & PREPARATION NOTES				
TRACTOR SHALL CONDUCT & SUBMIT TO THE LANDSCAPE ARCHITECT AN ANALYSIS OF A MINIMUM OF (3) SAMPLES OF FING SOIL FROM AREAS TO BE PLANTED . THE ANALYSIS SHALL BE DONE BY A SOIL TESTING LAB APPROVED BY THF				
SCAPE ARCHITECT IN ADVANCE AND SHALL INCLUDE THE FOLLOWING RESULTS WITH RECOMMENDATIONS:		TYPE AND DEPTH.		
A - ORGANIC MATTER, AVAILABLE PHOSPHORUS, EXCHANGEABLE POTASSIUM, MAGNESIUM, CALCIUM, SOIL pH, CATION CHANGE CAPACITY, PERCENT BASE SATURATION OF CATION ELEMENTS.		SET PLANTS 1-2 INCHES HIGHER THAN FINAL GRADE		
- SULFUR, ZING, MANGANESE, IRUN, CUPPER, BURUN IXTURE ANALYSIS	m	PLANTING SOIL, REFER TO SOIL		
UIL (& PLANTING SOIL WHEN DIFFERENT) SHALL BE PROVIDED MIXED AND READY FOR INSTALLATION. TOPSOIL SHALL THE FOLLOWING CRITERIA & STRIPPED/STOCKPILED TOPSOIL MAY BE USED IF IT CAN REASOANBLY BE BROUGHT UP TO CONTERNA	< / / / / / / / / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / / _ / / _ / / / / / / / / / / / / / / / / / / / /	PLANS & DETAILS		
: Скі і екіа. RTILE, FRIABLE, NATURALLY OCCURRING, FREE OF TRASH, ROCKS/STONES, & DEBRIS LARGER THAN 2 INCHES IN ANY		SLOPED & SCARIFIED SIDES OF		
JENSION EE OF ANY GRASSES, WEEDS, SEEDS, PLANTS, & ANY SUBSTANCE HARMFUL TO PLANT GROWTH.		PLANT PIT		
RANGE OF 5.0-7.0 RGANIC MATTER: 5-10%				
ND: 50-70%, SILT: LESS THAN 30%, CLAY: 10-25% RMEABILITY RATE OF 5X10 (-3) CENTIMETERS OR GREATER AT 85% COMPACTION		BALL WRAPPING, IF PRESENT		
TRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE THE LOCATION OF STOCKPILE AREAS FOR STRIPPED		INTO SOIL. SCARIFY ROOT BALL.		
RBANCE		ROOT BALL RESTING ON		
GRADES DEPICTED ON THE GRADING PLAN (REFER TO CIVIL DRAWINGS) ARE TO ACCOUNT FOR PLANTING SOIL DEPTHS ATED IN THE LANDSCAPE DRAWINGS/DETAILS. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO		EXISTING OR RECOMPACTED		
ALLING PLANTING SOIL. _ FINISHED GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. CONTRACTOR IS RESPONSIBLE FOR ANY	SHRUB PLANTING	JUDGRADE		
ITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION SUITABLE FOR PLANTING.	<b>5</b> 3/4" = 1'-0"			
RASH, DEBRIS LARGER THAN 2 INCHES IN DIAMETER IN ANY DIRECTION, ROCK, COBBLE, EXCAVATION SPOILS, & GRAVEL L BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE PRIOR TO THE INSTALLATION OF TOPSOIL/PLANTING SOIL.				
RDINATE INSTALLATION OF TOPSOIL/PLANTING SOIL WITH OTHER WORK. PLACEMENT SHALL OCCUR AFTER ALLATION OF HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEMS, UTILITIES, ETC. AND BEFORE PLANT INSTALLATION.				
TO PLANT INSTALLATION, PLANT BEDS AND PITS SHALL BE TESTED FOR PERCOLATION BY THE CONTRACTOR AT NO				
JUNAL CUST TO OVVINER, TEST SMALL COINSIST OF FFT DIAMETER BY TFT DEEP MIN HOLE, OR THE PLANTING PIT, HELED				

![](_page_53_Figure_2.jpeg)

![](_page_53_Figure_4.jpeg)

![](_page_53_Figure_7.jpeg)

I

13	14	15	16	17	
	<ul> <li>NOTES:</li> <li>1. REMOVE ALL NON-BIODEG ROOT BALL PACKAGING.</li> <li>2. REMOVE BURLAP AND STR TOP 1/3 OF ROOT BALL. RE BEND TOP 1/3 OF WIRE BAS INTO SOIL.</li> <li>3. TREES POSITIONED IN LAW HAVE MULCH RING, 8 FT DESIGN (1990)</li> </ul>	GRADABLE APS FROM MOVE OR SKET DOWN VNS TO IA.		11 North Water Street Suite 15250	МОВЛЕ, АL 30002 Т 251.460.4006 GMCNETWORK.COM
	<ul> <li>ROOT FLARE TO BE 2-3 IN A FINISHED GRADE.</li> <li>SOIL BERM BEGINNING @ E ROOTBALL, 4 IN HIGH FOR CIRCUMFERENCE.</li> <li>MULCH, REFER TO NOTES F TYPE/DEPTH. DO NOT PLAY AGAINST BASE OF TREE.</li> <li>SLOPED &amp; SCARIFIED SIDES PIT.</li> <li>PLANTING SOIL MIX.</li> <li>ROOT BALL RESTING ON EXISTING OR RECOMPACT SUBCIDADE</li> </ul>	ABOVE EDGE OF FULL FOR CE S OF PLANT		ISSUE DATE IFB SET 12.06.2023	DRAWN BY: AF CHECKED BY: JBB
	SUDGRADE.			INTEGRITY PARK PHASE II CITY OF SPANISH FORT SPANISH FORT, ALABAMA	LMOB230008
				RANDS	AL TOPLET
				PLANTING SCHEDULE, NOTES AND DETAILS	L1.06
13 ind including us	e on other projects is prohibited. In the ev	<b>15</b> vent that a conflict arises betw	<b>16</b> een the sealed drawings and the	17 e electronic files, the seal	ed drawings will gover

![](_page_54_Picture_0.jpeg)

![](_page_55_Figure_0.jpeg)

DRAWING FILE: L:/Mobile\+PROJECT FOLDERS\2023\LMOB230008 Integrity Park Phase I\\03 Construction Drawings - Specs\01_Primary\LMOBXXXXXX - IRRIGATION.d

![](_page_56_Figure_0.jpeg)

DRAWING FILE: L: Mobile + PROJECT FOLDERS / 2023 / LMOB230008 Integrity Park Phase II/03 Construction Drawings - Specs/01_Primary / LMOBXXXXX - IRRIGATION.dw

![](_page_57_Figure_0.jpeg)

DRAWING FILE: L: Mobile \+ PROJECT FOLDERS\2023\LMOB230008 Integrity Park Phase II\03 Construction Drawings - Specs\01_Primary\LMOBXXXXXX - IRRIGATION.d

![](_page_58_Figure_0.jpeg)

![](_page_59_Figure_0.jpeg)

7	8	9	10

# **IRRIGATION NOTES**

1. IRRIGATION DRAWINGS ARE DIAGRAMMATIC IN GENERAL & SUBJECT TO THE REQUIREMENTS OF THE PLANTING PLAN. THE IRRIGATION DRAWINGS INDICATE THE GENERAL LOCATION OF THE COMPONENT PARTS OF THE SYSTEM, BUT ARE NOT INTENDED TO SHOW ALL FITTINGS OR ALL DETAILS OF THE IRRIGATION WORK.

2. ALL IRRIGATION WORK WILL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE CODES & STANDARDS INCLUDING CITY CODES, ORDINANCES, & REGULATIONS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, FEES, & APPROVALS FROM GOVERNING AUTHORITIES.

4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH SITE CONTRACTOR THE INSTALLATION OF THE IRRIGATION WATER METER & BACKFLOW PREVENTER & CONNECTION TO NEW IRRIGATION SYSTEM.

5. TEST WATER PRESSURE DOWNSTREAM OF THE IRRIGATION WATER METER OR PUMP STATION DISCHARGE TO CONFIRM AVAILABILITY OF PROPER OPERATING PRESSURE. NOTIFY LANDSCAPE ARCHITECT IF AVAILABLE PRESSURE IS INSUFFICIENT OR EXCESSIVE.

6. PIPING FOR MAIN LINES SHALL BE PVC SCHEDULE 40 & ALL LATERAL LINES SHALL BE PVC CLASS 200. FITTINGS WILL BE PVC FOR CORRESPONDING SERVICE. PIPE DEPTH WILL BE A MINIMUM OF 12 IN. TO 18 IN. FOR ALL MAIN & LATERAL LINES. PIPE DEPTH MAY VARY DEPENDING ON LOCAL FROST DEPTH AND/OR REQUIREMENTS OF LOCAL GOVERNING AUTHORITIES AT SITE'S LOCATION.

7. ACCEPTABLE MANUFACTURER FOR IRRIGATION PRODUCTS IS SPECIFICED IN THE IRRIGATION SCHEDULE UNLESS OTHERWISE INDICATED. ALTERNATE IRRIGATION MANUFACTURER'S EQUIPMENT MAY BE SUBSTITUTED WITH APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO BID. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING HEAD LAYOUT & LOCATIONS, VALVE LOCATIONS, PERFORMANCE DATA, ETC. SHOULD ALTERNATE MANUFACTURER BE USED. 8. INSTALL ALL IRRIGATION COMPONENTS AS PER MANUFACTURER'S RECOMMENDATIONS OR INSTRUCTIONS.

9. REMOTE CONTROL VALVES & OTHER UNDERGROUND DEVICES WILL BE INSTALLED IN PLASTIC BOXES WITH PLASTIC COVERS OF THE SIZE REQUIRED TO ENSURE ADJUSTMENT OF THE DEVICE. GROUP DEVICES IN SINGLE BOXES WHERE POSSIBLE.

10. IRRIGATION HEADS TO BE LOCATED A MINIMUM OF 4 IN. OFF SIDEWALKS/CURBS & 6 IN. FROM BUILDINGS OR WALLS. 11. ADJUST IRRIGATION AS NECESSARY TO AVOID EXISTING UTILITIES, LIGHT POLES, BUILDINGS, AND/OR OTHER UNFORSEEN OBSTRUCTIONS.

12. IRRIGATION CONTROLLER LOCATION SHOWN ON DRAWINGS IS APPROXIMATE & ONLY A PLACEHOLDER. LANDSCAPE CONTRACTOR TO VERIFY EXACT LOCATION OF IRRIGATION CONTROLLER WITH OWNER PRIOR TO CONSTRUCTION. CONTRACTOR TO PROVIDE CONTROLLER WITH APPROPRIATE ENCLOSURE FOR SPECIFIC LOCATION WHETHER INTERIOR, EXTERIOR, WALL MOUNT, OR PEDESTAL ENCLOSURE APPLICATION.

13. CONTRACTOR SHALL INSTALL GROUNDING, SURGE, & LIGHTNING PROTECTION AS PER IRRIGATION MANUFACTURER'S RECOMMENDATIONS.

14. VALVES, CONTROLLERS, & ALL IRRIGATION EQUIPMENT TO HAVE PROPER GROUNDING PROTECTION AS PER IRRIGATION MANUFACTURER'S RECOMMENDATIONS.

15. CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS OF THE SYSTEM AT THE COMPLETION OF THE PROJECT.

![](_page_59_Figure_20.jpeg)

	CHEDULE						SCHEDULE						
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI			NUMBER	MODEL		SIZE	TYPE	GPM	PSI	PSI @ POC
A A A A A A A A A A A A A A A A A A A	RAIN BIRD 1804-SAM-PRS 15 STRIP SERIES TURF SPRAY 4.0IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	7	30			1 2 3 4	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1" 1" 1-1/2" 1"	TURF ROTOR TURF ROTOR TURF ROTOR TURF ROTOR	6.6 19.8 41.1 19.8	46.3 48.6 46.0 47.3	56.4 59.4 59.9 58.3
<b>③ ④ ●</b> Q T H F	RAIN BIRD 1804-SAM-PRS 8 SERIES MPR TURF SPRAY 4.0IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	2	30			5 6 7 8 9 10	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1" 1" 1-1/2" 1" 1" 1-1/2"	TURF ROTOR TURF ROTOR TURF SPRAY TURF ROTOR TURF ROTOR	19.8 27.4 24.93 19.8 6.6 30.48	46.5 48.3 33.4 48.4 46.2 36.1	57.7 60.6 45.4 59.8 56.3 49.8
() Q T H F	RAIN BIRD 1804-SAM-PRS 10 SERIES MPR TURF SPRAY 4.0IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	1	30			11 12 13 14 15	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1" 1-1/2" 1" 1" 1-1/2"	TURF SPRAY TURF ROTOR TURF ROTOR TURF ROTOR TURF ROTOR	9.62 27.4 19.8 19.8 41.1	36.8 43.9 48.0 47.9 45.9	47.2 57.3 61.0 60.8 64.1
() Q T H TQ F	RAIN BIRD 1804-SAM-PRS 15 SERIES MPR TURF SPRAY 4.0IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	99	30			16 17 18 19 20	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1-1/2" 1" 1" 1" 1-1/2"	SHRUB SPRAY TURF ROTOR TURF ROTOR TURF ROTOR TURF ROTOR	47.97 6.6 19.8 19.8 27.4	40.1 46.1 48.4 47.7 44.6	56.4 60.8 60.1 59.1
AAAAAA EST LCS RCS CST SST	RAIN BIRD 1812-SAM-PRS 15 STRIP SERIES SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	45	30			21 22 23 24 25 26	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1-1/2" 1" 1" 1" 1" 1"	TURF ROTOR TURF ROTOR TURF ROTOR TURF ROTOR TURF ROTOR	41.1 19.8 19.8 6.6 19.8 27.4	46.8 47.7 48.4 46.1 46.7	67.6 61.2 62.5 56.8 59.5 64.2
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS	28	RAIN BIRD PGA-F	PRS-D GLOBE	1–1/2"	TURF ROTOR	41.1	46.4	68.0
04	RAIN BIRD 6504-PC, FC 04 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	8	40	3.3	41'	28 29 30	RAIN BIRD PGA-F RAIN BIRD PGA-F RAIN BIRD PGA-F	PRS-D GLOBE PRS-D GLOBE PRS-D GLOBE	1" 1-1/2" 1-1/2"	TURF ROTOR TURF SPRAY TURF SPRAY	19.8 51.96 29.55	47.7 40.9 35.9	60.8 58.8 49.7
08	RAIN BIRD 6504-PC, FC 08 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	36	40	6.6	49'		CONTRACTOR TO THE INSTA	R TO COMPLY LLATION OF P	W/ALL LO VC PIPINO	DCAL CODES AND G AND LOW VOLTA	ORDINANO AGE WIRINO	CES IN REFERE G.	NCE
18	RAIN BIRD 6504-PC, FC 18 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	20	40	13.7	59'	MA LC TUBING OF	AIN SUPPLY, LATER, DW-VOLTAGE WIRIN 12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"	AL, MAIN NG SUPPL 6'-8" 12" 18"	1 .Y - \$344336	LATERAL LOW LINE	V-VOLTAGE WIRING	E 120 VOLT WIRING	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				WIRING					{ <b>&amp;</b> } 2"	2"	
•	RAIN BIRD PGA-PRS-D GLOBE 11N., 1-1/2IN., 2IN. ELECTRIC REMOTE CONTROL VALVE, GLOBE. WITH PRESSURE REGULATOR MODULE.	30						I LINE	TRAC #14-1 (	, <del>, , , , , , , , , , , , , , , , , , </del>	*-*	*-*\ \ \	ALL 120 VOLT WIRING TO BE NSTALLED IN
BF	BACKFLOW PREVENTER 2" BACKFLOW REDUCED PRESSURE ZONE, AS PER LOCAL REQUIREMENTS, CODES, AND STANDARDS	1							* *			, V	ACCORDANCE W/LOCAL COE
C	RAIN BIRD ESP-LXD 50 STATION, 2-WIRE DECODER BASED CONTROLLER. (1) ESP-LXD 50-STATION, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE. SYSTEM REQUIREMENTS: RAIN BIRD FD-XXX-TURF FIELD DECODERS, PAIGE ELECTRIC CABLE P7072D & RAIN BIRD WC20 DRY SPLICES ONLY. GROUND SYSTEM W/ (X) LSP-1TURF LINE SURGE PROTECTORS IN RAIN BIRD ROUND VALVE BOXES. INSTALL PER MANUFACTURERS RECOMMENDATIONS.	1				- 20	TAPE ANE TUBING C AT 20' INT	D BUNDLE DR WIRING ERVALS	ALL M BE INS ACCO W/MA INSTAI SPECI	AIN SUPPLY LINES TALLED IN RDANCE NUFACTURER'S LLATION FICATIONS	ΤΟ	- TIE A LOOSE WIRING AT A OF DIRECTIO THAN 30° UN LOOPS AFTE CONNECTIO COMPLETEE	E 20" LOOP IN ALL CHANGES ON GREATER ATIE ALL ER ALL ONS HAVE BEE O
R	RAIN BIRD RSD-BEX RAIN SENSOR, WITH METAL LATCHING BRACKET, EXTENSION WIRE.	1											
Μ	WATER METER 1-1/4" WATER METER - SEE CIVIL PLANS	1				-			RENC	CHING			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	6,465 L.F.					NTS						
	IRRIGATION MAINLINE: PVC SCHEDULE 40	2,685 L.F.				I	RAIN BIRD VID SERI	ES ID TAG –		RAIN BIRD F CONTROL V SCHEDULE	PGA MODE VALVE, SIZ	E REMOTE E AS NOTED IN	1
	PIPE SLEEVE: PVC SCHEDULE 40	514.3 L.F.				RAIN BIR	D SPLICE-1 WATERF CONNECTION (	PROOF		RAIN	BIRD VB-S	TD VALVE BOX	<

С

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Valve Flov — Valve Size

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![](_page_60_Figure_12.jpeg)

![](_page_60_Figure_13.jpeg)

JBB

DRAWN BY: SHECKED BY: U

![](_page_60_Figure_15.jpeg)

# 3 RAIN BIRD PGA REMOTE CONTROL VALVE

![](_page_60_Picture_19.jpeg)

![](_page_61_Figure_0.jpeg)