

Office of Facilities Planning & Construction

University of North Texas

University of North Texas Health Science Center University of North Texas at Dallas.

DATE:	November 16, 2022
TO:	Potential Respondents
FROM:	Carrie Stoeckert-Senior Construction Contract Coordinator
SUBJECT:	Questions #1 RFCSP752-23-261209CS UNT Advanced Air Mobility (UAAM) Test Center

This document is being issued to answer questions that have been submitted as follows:

NOTICE: Please note the Response due date, HSP due date and Opening dates have changed:

RESPONSE DUE:	January 3, 2023 @ 2:00 PM CST
HSP DUE DATE:	January 4, 2023 @ 2:00 PM CST
OPENING:	January 10, 2023 @ 2:00 PM

- Please provide the site-specific geotechnical report.
 a. See attached document.
- The Division 00 and Division 01 specification sections that are shown in the file attached are missing from the project manual. Please provide these sections.
 a. Since the project is fairly simple we will forego the Division 01 sections.
- 3. Legend item #4 on C2.00 indicates decomposed granite mow strip, with a subnote to Add Separate Bid Item. Is this scope to be included in the base bid or provided as an alternate? Please provide a section detail for this material.
 - a. The mow strip is to be part of the base bid. A mow strip detail has been added to sheet C9.00.
- Please provide details for the concrete transformer pad, concrete base and unistrut frame for the new electrical panel, and the concrete pad for the IT cabinet.
 a. Electrical pad detail has been added to Sheet C9.00.
- 5. The provided bid form indicates no alternates; however, the following alternates were listed on the documents; please clarify a. Sheet E2.01 Add Alt #1: Provide (2) duplexes at pole mounted at 3ft and 10ft above ground. b. Sheet T1.01 Add Alt #1: Provide (2) data drops at pole mounted at 10ft, 15ft above grade. Typical all poles with (2) drops. Sheet T1.01 Add Alt #2: Provide (1) 6" C in lieu of (1) 4" C.
 - a. Revise bid form to include alternates attached.

- 6. Please provide an interior floor plan showing the locations of existing electrical and IDF rooms, as well as any rated partitions.
 - a. See attached. Room H101A is the IDF closet. H139 is the mechanical/electrical room.
- 7. Sheet E2.01 keyed note #5 indicates to provide 1500W 5G equipment. Please provide make and model of required 5G equipment.
 - a. Scope is to provide socket/power for 5G equipment for power consumption of 1300-1500w w/ 110v. Equipment will be provided by UNT at a later date.
- 8. Please provide the location of the keyed switch for the pole-mounted site light fixtures shown on E1.01.
 - a. The Intermatic time clock is lockable and is the keyed switched reference on the lighting set.
- Is the Contractor allowed to make use of existing restrooms on-site?
 a. Unfortunately, no.
- 10. Please indicate location for Contractor parking. Will parking permit costs be required?
 - a. Parking permits will be issued by UNT for Lot 94.
- Please advise if there is a location onsite to haul off spoils from concrete piers?
 a. Yes, location to be coordinated onsite.
- 12. Due to the specialty nature of the drone netting scope of work, there are limited subcontractors able to perform this work. None of which are HUB certified. Please advise on how this scope of work should be represented on the HUB Subcontracting Plan.
 - a. If the HUB goal is being met for the project than you would just need to list the sub-contractor you selected for the scope.
 - b. If the HUB goal is <u>not</u> being met, a good faith effort is required as part of the Method B instructions. If you need assistance with completing a Method B and locating potential HUBs for the scope, you can email <u>hub@untsystem.edu</u>. Based on your statement, we will have to complete a search for HUBs who do drone work. If the HUBs you contact do not respond or are not able to complete the scope of work, you can indicate you selected a non-HUB.
 - c. If you believe an exception should be made for the "good faith effort", you can email the HUB coordinator <u>Michelle.mccauley@untsystem.edu</u>. She will determine if one can be made.
- 13. Where can we obtain copy of plans and specifications? Will they be uploaded in Jaggaer?
 - a. The Plans and Specs other than those additional attached hereto are already attached to the RFCSP as an Exhibit.

- 14. According to the structural sheets, the steel columns and netting are to be provide by others. Please confirm if this scope is for the GC or for the Owner.a. By contractor
- 15. Also, I do show there is some synthetic turf but there is no detail callout.
 - a. Detail No. 3 in Sheet C9.00 corresponds to the synthetic turf detail.
- 16. Who is responsible for providing the cabling?
 - a. UNT System vendor.

BASE BID

Pursuant to and in compliance with the Contract Documents and any attachments thereto, including the Advertisement for Competitive Sealed Proposal and Instruction for Proposals, the Proposer hereby certifies that it has, carefully examined the Contract Documents entitled:

UNT UAAM Test Center Prepared by: Walter P. Moore

Proposal can be bid on both of the following or just one based on the service the contractor can provide: Provide required materials, services for either or both scopes:

1. Civil, structural, ground cover, power/data infrastructure

2. Poles and netting

Base Bid #1: The conditions affecting the Work, and being familiar with the site; and having made the necessary examinations, proposes to furnish all labor, materials, equipment, and services necessary to complete the Work in strict accordance with the Contract Documents for the above referenced project for the civil, structural, ground cover, power/data infrastructure, etc. excluding poles and netting for the following sum (Not including bond cost):



Base Bid #2: The conditions affecting the Work, and being familiar with the site; and having made the necessary examinations, proposes to furnish all labor, materials, equipment, and services necessary to complete the Work in strict accordance with the Contract Documents for the above referenced project for the poles and netting for the following sum (Not including bond cost):



ALTERNATE BIDS

Number	Description of Alternate Bid:	Additive/Deductive	Bid Amount:
1	Sheet E2.01 - Provide (2) duplexes at pole mounted at 3ft and 10ft above ground.	 Additive Deductive 	\$
2	Sheet T1.01 - Add Alt #1: Provide (2) data drops at pole mounted at 10ft, 15ft above grade. Typical all poles with (2) drops.	□ Additive □ Deductive	\$
3	Sheet T1.01 - Add Alt #2: Provide (1) 6" C in lieu of (1) 4" C.	□ Additive □ Deductive	\$





UNIVERSITY OF NORTH TEXAS ADVANCED AIR MOBILITY (UAAM) TEST CENTER

APPLICABLE CODES AND STANDARDS
2018 INTERNATIONAL BUILDING CODE
ASCE 7-16
ACI 318-14
AISC 360-16
ASCE 19-16
218 INTERNATIONAL ENERGY CONSERVATION CODE
NFPA 70, NATIONAL ELECTRIC CODE
ANY OTHER CODES AND STANDARDS REFERENCED
IN THE GENERAL NOTES OR SPECIFICATIONS

SHEET INDEX		
SHEET		0.07.2022 - BID SET
GU.00		^ X
C1 00		X
$C_{2,00}$	SITE PLAN	X
C3.00	GRADING PLAN	X
C8.00	EROSION CONTROL PLAN	X
C9.00	CIVIL DETAILS	X
S0.00	COVER SHEET	Х
S0.01	GENERAL NOTES	Х
S2.01	OVERALL PLAN	Х
S2.10	PLANS, SECTIONS AND DETAILS	Х
S3.01	TYPICAL FOUNDATION SECTIONS AND DETAILS	Х
E0.01	ELECTRICAL SYMBOLS	Х
E1.01	LIGHTING PLAN	Х
E2.01	POWER PLAN	Х
E3.01	ELECTRICAL RISER DIAGRAM & SCHEDULES	Х
E4.01	ELECTRICAL DETAILS	Х
Т0.00	LOW VOLTAGE SYMBOLS	Х
T1.01	LOW VOLTAGE PATHWAYS PLAN	Х
T2.01	WIRELESS ACCESS PLAN	Х

	DRAWING LEGEND
X	ISSUED FOR INFORMATION AND COORDINATION
	ISSUED FOR CONSTRUCTION
Ø	SHEET REMOVED FROM SET



Walter P. Moore and Associates, Inc. 500 N Akard Street, Suite 2300 Dallas, Texas 75201 214.740.6235 FIRM REGISTRATION NO. 1856

UNT ADVANCED AIR MOBILITY (UAAM) TEST CENTER

Client : University of North Texas Discovery Campus 3940 N Elm Street Denton, TX 76207

Consultants / Discipline :

Keyplan :

Issues/Revisions: **BID SET** No. | Date | Description Project UNT UAV Drawn By: CML Project Number M04-22008-00 Approved By: JDD Checked By : JDD Certification Statement : TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES. Seal and Signature : X JAMES D. DAVIS JR Walter P. Moore and Associates, Ir TBPE Firm Registration No. 1856 Copyright (c) 2008 by Walter P. Moore and Associates, This document and the information herein is the property of Walter P Moore and Associates, Inc. No part hereof shall be duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by Walter P. Moore and Associates, Inc. Any person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by Walter P. Moore and Associates, Inc. Drawing Title: COVER SHEET Filename : Sheet No. :

G0.00









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ASPHALT ROAD

S BH# B3

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LIMITS OF CONSTRUCTION -





- 3. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
- 4. NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
- 5. LOCATE AND CLEARLY FLAG TREES TO REMAIN OR TO BE REMOVED. 6. KNOWN UTILITIES ARE SHOWN ON DRAWINGS. IF UTILITIES ARE DISCOVERED THAT ARE NOT SHOWN CONTACT OWNER/ENGINEER FOR DIRECTION.
- 7. THAT PORTION OF THE SITE REQUIRED FOR CONSTRUCTING THE WORK UNDER THESE SPECIFICATIONS SHALL BE CLEARED OF ALL VEGETATION TO THE LIMITS AS DEPICTED IN THE PLANS.
- AFTER THE AREA HAS BEEN CLEARED OF ALL VEGETATION, THE TOP SIX INCHES OF SOIL SHALL BE STRIPPED. ALL STRIPPED TOPSOIL SHALL BE STOCKPILED.





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C1.00



TC GC	TOPOGRAPHIC INFORMATION WAS OBTAINED FROM SURVEY BY GORRONDONA & ASSOCIATES, INC. DATED MAY 20, 2022.		
AL SY	ALL BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTE, NAD 83.		
AL SC	L DISTAN ALE FACT	ces and for for	AREAS SHOWN ARE SURFACE. TXDOT DENTON COUNTY TEXAS 1.000150639.
	Lege	end:	
	1	· · · · · · · · · · · · · · · · · · ·	ARTIFICIAL TURF (REF. DETAIL 3/C9.00)
	2		LIGHT-DUTY POROUS FLEXIBLE PAVING (REF. DETAIL 1/C9.00)
	3	\square	HEAVY-DUTY POROUS FLEXIBLE PAVING (REF. DETAIL 2/C9.00)
	4		DECOMPOSED GRANITE MOW STRIP (REF. DETAIL 4/C9.00)
	5		PROP. GUY WIRE (REF. S2.10)
	6	0	PROP. STEEL POLE ON PEDESTAL (REF. S2.10)
	⊘	0	PROP. PIER (REF. S2.10)
SHEET NOTE	S		
1. ALL DIME	NSIONS A	RE FROM	BACK OF CURB UNLESS OTHERWISE
NOTED			

- 2. FIELD VERIFY DEPTH OF EXISTING UTILITIES AT CROSSINGS WITH PIERS AND PROPOSED UTILITIES.
- 3. LOCATION OF UTILITY PADS TO BE CONFIRMED BY ELECTRICAL ENGINEER PRIOR TO PLACING OF PADS AND DECOMPOSED GRANITE.

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10. UTILITY PADS TO BE PLACED EIGHT INCHES ABOVE FINISHED GRADE.

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C300

Sheet No. :

- REINFORCED FILTER FABRIC FENCE NOTES:

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- CONSTRUCTION ACTIVITIES BEGIN. 2. SEDIMENT AND EROSION CONTROLS INCLUDING
- NON-STORMWATER DISCHARGES SHALL BE AS PER THE SPECIFICATIONS.

EROSION CONTROL PLAN NOTES:

- . CONTRACTOR TO FURNISH SWPPP PER TCEQ REQUIREMENTS. THE EROSION CONTROL PLAN AS CONTAINED IN THE DRAWING SET CAN BE USED IN THE STORM WATER POLLUTION PREVENTION PLAN
- 2. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES, REINFORCED FILTER FABRIC BARRIER, STABILIZED CONSTRUCTION ENTRANCES AND OTHER STORM WATER POLLUTION PREVENTION MEASURES AT LOCATIONS SHOWN ON THE PLAN(S) TO KEEP SILT AND/OR EXCAVATED MATERIALS FROM ENTERING THE STORM WATER INLETS AND DITCHES, EVENTUALLY POLLUTING THE RECEIVING STORM SYSTEM. NO HAY BALES WILL BE ALLOWED.
- 3. DURING THE EXCAVATION/FILL PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN APPROPRIATE SEGMENTS SO THAT EXCESS MATERIAL CAN BE QUICKLY HAULED AWAY PREVENTING IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENT OR DRIVEWAYS SHALL BE REMOVED APPROPRIATELY.
- 4. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY AND ADDITIONALLY AS NECESSARY TO REMOVE EXCESS MUD, SOIL, SILT OR ROCK TRACTED FROM THE EXCAVATED AREA.
- 5. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
- 5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.
- A. DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED. B. AREAS USED FOR STORAGE OF MATERIALS THAT ARE
- EXPOSED TO PRECIPITATION C. STRUCTURAL CONTROL MEASURES.
- D. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- . CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING DITCHES AND/OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS. SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES STEEPER THAN 4:1 SHALL BE REPLACED BY BLOCK SODDING. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH PLANT MATERIALS NOT REQUIRING MOWING FOR MAINTENANCE AND/OR GEOTEXTILE FABRICS AS REQUIRED IN THE PLANS AND SPECIFICATIONS.

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UNT ADVANCED AIR MOBILITY (UAAM) TEST CENTER

Client : University of North Texas **Discovery Campus** 3940 N Elm Street Denton, TX 76207

Consultants / Discipline :

Keyplan :

Issues/Revisions: **BID SET** No. | Date | Description Project UNT UAV Drawn By: CML Project Number M04-22008-00 Approved By: JDD Checked By : JDD Certification Statement : TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES. Seal and Signature : X JAMES D. DAVIS JR 91256 Walter P. Moore and Associates, Inc TBPE Firm Registration No. 1856 Copyright (c) 2008 by Walter P. Moore and Associates, This document and the information herein is the property of Walter P Moore and Associates, Inc. No part hereof shall be duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by Walter P. Moore and Associates, Inc. Any person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by Walter P. Moore and Associates, Inc. Drawing Title: **EROSION CONTROL** PLAN Filename : Sheet No. :

NOTE: CONTRACTOR SHALL IDENTIFY AND PROTECT ALL TREES PRIOR TO CONSTRUCTION.

<u>GENERAL NOTES:</u>

OR LOWERED MORE THAN 3".

NOT TO SCALE

- 1. THE RPZ SHALL BE DETERMINED BY TREE SIZE (1 FOOT RADIUS FROM TRUNK FOR EVERY 1" DIAMETER OF TRUNK CALIPER AT 4.5' FROM GROUND)
- WITH A MINIMUM 5' FROM THE TRUNK. ROOT PROTECTION ZONES MAY OVERLAP. SEE TREE PROTECTION DETAIL THIS SHT.

- 2. A 4' CHAIN LINK, GEOTEXTILE OR ORANGE MESH FENCE BARRIER AROUND THE RPZ SHALL BE ERECTED AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETE. SEE TREE PROTECTION DETAIL ON THIS SHT.

- 3. THE RPZ SHALL BE SUSTAINED IN A NATURAL STATE AND SHALL BE FREE FROM ANY CONSTRUCTION ACTIVITY. NO FILL, EQUIPMENT, LIQUIDS, OR
- CONSTRUCTION DEBRIS SHALL BE PLACED WITHIN THE PROTECTIVE FENCING.

- 4. THE RPZ SHALL BE COVERED WITH A MIN. 4" LAYER OF MULCH TO REDUCE MOISTURE STRESS.

- 5. ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY. ALL WOUNDS TO LIVE OAKS SHALL BE PAINTED

7. PROTECT ALL EXISTING TREES NEAR AREAS TO BE STABILIZED FROM UNDERGROUND CONTAMINANTS BY PLACING A 6 MIL. (.15 mm) PLASTIC FILM

BARRIER ALONG EXPOSED VERTICAL CUT EXTENDING A MINIMUM 12 INCHES INTO UNDISTURBED SUBGRADE BELOW DEPTH OF STABILIZATION.

- 6. THE PROPOSED FINISH GRADE AND ELEVATION OF LAND WITHIN THE ROOT PROTECTION ZONE OF ANY TREE TO BE PRESERVED SHALL NOT BE RAISED

2.5'

- FINISHED GRADE

– 4000 PSI CONCRETE @ 28 DAYS

<u>4</u>

NO. 3 BARS @ 6" -

ELECTRICAL PAD NOT TO SCALE

TOP AND BOTTOM O.C.E.W.

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- WITH PRUNING PAINT NO LONGER THAN 30 MINUTES AFTER THE DAMAGE. ROOTS EXPOSED DUE TO CONSTRUCTION ACTIVITY SHALL BE CUT CLEANLY.

TREE PROTECTION DETAIL

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C900

Sheet No. :

APPLICABLE CODES AND STANDARDS:

- 2018 INTERNATIONAL BUILDING CODE

- ANY OTHER CODES AND STANDARDS REFERENCED IN THE GENERAL NOTES OR

Walter P Moore and Associates, Inc 500 N Akard Street, Suite 2300 Dallas, Texas 75201

214.740.6200

Project

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Consultants /

Keyplan

lssue	es/Revisions	
		BID SET
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Proje	ct UNT UA	.∨ Drawn By∶ MSN
Proje Appro	ct Number	M04-22008-00 Checked By: WMD
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PART I - DESIGN CRITERIA	PART III - REINFORCED CON
 A. GENERAL BUILDING CODE The Construction Documents are based on the requirements of the International Building Code 2018. B. DEAD LOADS Netting Dead Loads: An allowance of 5 PSF or the actual weight of the netting, whichever is greater, has been made for partitions as a uniformly distributed dead load. C. LIVE LOADS 	A. CLASSES OF CONCRETE 1. All concrete shall conform to the r below unless noted otherwise. Usage 28 Day comp Conc Strength (PSI) PIERS AND 5000 PIER CAPS <u>Remarks:</u> 1. In addition to minimum strength
 UNT provided Drone Impact Load: Impact loading for a maximum 150 lbs drone traveling at maximum speed of 35 mph and maximum propeller speed of 2,000 rpm with maximum diameter of 60 cm. WIND LOADS Wind pressures are based on the provisions of the American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures, ASCE 7-16 and the following criteria:	 In addition to minimum strengtr proportioned for maximum water B. HORIZONTAL CONSTRUCTION JOINTS IN CONCRE 1. There shall be no horizontal constr pours unless shown on the drawings. all deviations or additional joints C. REINFORCING STEEL 1. All Beinforcing Steel shall conform
 b. Nonial design wind speed (Vas): 83 MPH (3-second gust) c. Building risk outgory: 11 d. Internal pressure coefficient (80p1): 0 E. SEIGNIC DESIGN CRITERIA 1. The structure and components of the building have been designed in accordance with afformametized building code with the following criteria: a. 0.2 sec. Spectral Acceleration (S1): 12.4%g b. 1 sec. Spectral Acceleration (S3): 12.4%g c. Site Class: C (Io be Confined by Bettechnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confined by Sectebnical Engineer) d. Site Class: C (Io be Confiled by Sectebnical Engineer) d. Site Class: C (Io be Confiled by Sectebnical Engineer) d. Site Class: C (Io be Confiled by Sectebnical Engineer) d. Submit Design Classery: A For SEC A, no selsaic design of the Applicable 1. Selsmic Besense Base Sheen (kips): Not Applicable 2. Seismic demands on nonstructure aballable designed in accordance with the afromentized by Using Contents on the sectem of the sectem and an accordance with the afromentized by Sectem Sectem and accordance with the afromentized by Using Vie by Sectem 11:1114 Seismic demands of any future expansions have been made in the structureal design of any future expansions have been made in the structureal design of any future explander to accordance with the sectem for a sectem i	 All Reinforcing Steel shall conform otherwise on the drawings or in the Reinforcing Steel: Provide reinforcing st noted on the drawings. a. Field welding to be done by welf for reinforcing steel. Continue is required. b. Shop welds must be performed in shop. Deformed Bar Anchors: 3/8" to 5/8" 7.1) studs manufactured in conforma with a minimum yield strength 70,00 A706 bars of equal size with welds strength of anchor. ASTM A 615 rein for deformed bar anchors. Headed Stud Anchors for Embedded PI manufactured in conformance with sp tensile strength of 61,000 PSI. Headed Stud Anchors for Shear Reinfor minimum yield strength of 51,000 PS Smooth Welded Wire Reinforcement: A 65,000 PSI. Deformed Welded Wire Reinforcement: 70,000 PSI. Deformed Welded Wire Reinforcement it shall be continuous across the e interrupted by beams or girders and and 25.5.4. REINFORCEMENT IN TOPPING SLABS Provide minimum reinforcement as no unless specified otherwise on the da. Welded smooth wire reinforcement structural members not specified in requirements of ACI 318 unless spec reinforcing steel coverage shall co specified in the stails labeled "TYPIC S3.01 unless noted otherwise on the specified shall be considered minim reinforcing steel detailer shall ad intersecting structural members as intersecting reinforcing steel heads or base rails shall not be le- reinforcement in the type of member reinforcement is placed. Cover in s conform to the requirements of ACI drawings. WALL AND COLUMN DOWELS Splice Location And Type and Hooks And Walls: Beams an
 PART II - FOUNDATION A. GEOTECHNICAL REPORT A. GEOTECHNICAL REPORT A. GEOTECHNICAL REPORT A. GEOTECHNICAL REPORT A. Geotechnical report is available to the General Contractor upon request to the Owner. The information included therein may be used by the General Contractor for their general information only. The Architect and Engineer will not be responsible for the accuracy or applicability of such data therein. B. DEEP FOUNDATION TYPE B. DEEP FOUNDATION TYPE Drilled Pier Foundation Bearing Stratum: Limestone/Shale Total Load: 35,000 PSF allowable pressure Skin Friction: 4,500 PSF allowable side friction C. CONSTRUCTION DEWATERING The Contractor for the excavation. The Contractor shall submit to the Geotechnical Engineer for review the proposed plan for construction dewatering, prior to beginning the excavation. D. CARTON FORMS Carton forms shall be manufactured using wax impregnated corrugated paper designed to support the wet weight of the concrete that is shown by the details to be poured on top of the form but not less than 600 PSF. Refer to paragraph B of the Reinforced Concrete notes for the restriction on horizontal construction joints. 	

	GENERAL STRUCTURAL NOTES	
ICRETE	PART IV - STRUCTURAL STEEL	PART VI - SU
	A. MATERIAL	A. SUBMITTAL LIST AN
equirements as specified in table	shapes, sheet piling, and bars shall be new steel conforming to ASTM Specification A 6.	of all submi the start of kept current
c Type Max Size Agg Remarks NWC 1" 1	2. ASTM Specification and Grade: Clearly mark the grade of steel on each piece, with a distinguishing mark visible from floor surfaces, for the purpose of field inspection of proper grade of steel. Unless noted otherwise on the drawings, structural steel shall be as follows:	organized as a. Shop Dra b. Design C c. Product
n requirement, concrete shall be	b. M- and S-Shapes: ASTM A 36 c. C-Shapes: ASTM A 36 d. L-Shapes: ASTM A 36	B. SUBMITTALS TO BE
cement ratio of 0.45 TE POURS	e. Round HSS: ASTM A 500, Grade B (Fy=42 ksi) f. Rectangular HSS: ASTM A 500, Grade B (Fy=46 ksi) g. Jumbo Square and Rectangular Hollow Structural Sections:	the structur provided: a. Layout c
uction joints in any concrete The Architect/Engineer shall approve	Built to physical and dimensional criteria of ASTM A 500 from ASTM A572 Grade 50. h. Steel Pipes: ASTM A 53 (Types E or S), Grade B.	Items At Attachme
in writing.	 i. Built-Up Columns: 1) Plates to 4" thick inclusive: ASTM A 572, Grade 50. j. Built-Up Columns: ASTM A 36>. 	2. Deferred Sub a. The foll register
to ASTM A 615, Grade 60 unless noted se notes.	 k. Base Plates: All base plates shall conform to ASIM A 572 Grade 50 unless noted otherwise on the drawings. 1. Connection Material: 1. Beam Column Continuity Plates and Doublen Plates: ASIM A 	1) Exc 2) Exc 3) Net
ing steel conforming to ASTM A eel required to be welded and where	 a) Beam Column Continuity Plates and Doubler Plates: ASIM A 572, Grade 50. 2) All connection material, except as noted otherwise herein on on the drawings including bearing plates, gueset plates. 	4) Met 5) Str
ders certified by the LADBS ous inspection by a deputy inspector	stiffener plates, filler plates, angles, etc. shall conform to ASTM A 572, Grade 50 unless a higher grade of steel is required by strength and provided the resulting sizes are compatible	Notes:
n an LADBS-licensed fabrication	m. Other Steel: Any other steel not indicated otherwise shall conform to ASTM A 992 or ASTM A 572, Grade 50, except plates and	(S&S) Ite delegated de project spec
diameter AWS D1.1 Type C (Table nce with specification ASTM A 1064 0 PSI. 3/4" or larger diameter, ASTM	angles that shall be ASTM A 36. B. CONNECTIONS	the project (REC) Iter
to steel substrate that develop full forcing bars shall not be substituted	 Connection details not completely detailed on the drawings including material grade and sizes, weld sizes, and number of bolts 	Record Only affixed.
ates: AWS D1.1 Type A studs ecification ASTM A 29 with a minimum	shall be designed by the Contractor per the specifications. Conceptual connection details with the required member design forces are shown on the drawings and are applicable to all connections not designed and	b. Document the regi building
rcement: ASTM A 1044 with a I.	fully detailed on the drawings. The conceptual details are provided only to indicate the connection type required and may not fully represent the complexity of the connection as required by the final connection design	deferred official
STM A 1064, yield strength	be specifically shown in the conceptual details but may be required by the final connection design, such as stiffener plates, doubler plates, supplement/ reinforcing plates or other connection material. The	3. Submittals w. a. Mechanic
ASTM A 1064, yield strength	fabricator is responsible for engaging the services of a connection specialty engineer to prepare a final connection design for submission that meets the requirements of the conceptual connection details and	4. Submittal Re a. All shop by the G
	resists the indicated design forces. 2. Refer to the Specifications for additional requirements.	b. Contract document c. The omis
ntire concrete surface and not properly lapped per ACI 318, 25.5.3	3. Reactions noted on the plans are based on factored loads and are intended for use with the Load and Resistance Factor design method.	by the C Contract material
	C. STRUCTURAL BOLTS AND THREADED FASTENERS	C. REPRODUCTION
ted below in all topping slabs rawings. 1t 6x6-W2.9xW2.9.	A 325 Bolts: All bolts in structural connections shall conform to ASTM A 325 Type 1, unless indicated otherwise on the drawings.	1. The use of e documents by material sup
	 3. Threaded Round Stock: Threaded rods shall conform to: 	their accept obligates th any errors t
nform to the requirements AL CLEAR CONCRETE COVER" on sheet drawings. Cover	a. ASTM A 36. b. ASTM A 572 Grade 50 (to 2 inches in diameter).	PART VII - MI
ums that may require increasing where fferent member types. Cover in the details shall conform to the ified otherwise on the drawings. The	4. Pins: All pins in pin connected members shall conform to ASTM A 36 and ASTM A 108 for pins four inches in diameter or less, and to ASTM A 668 Class D (Fy = 37,500 PSI) for pins greater than four inches in	A. CONTRACT DOCUMENT
just reinforcing steel cage sizes at required to allow clearance for with minimum specified cover.	D. WELDING	1. It is the rea Contract Doc all subcontra
	1. Unless noted otherwise, electrodes for welding shall conform to E70XX (SMAW), F7XX-EXXX (SAW), ER70S-X (GMAW), or E7XT-X (FCAW).	drawings, fa field.
se rails of headed shear stud ll conform to the requirements cover. The concrete cover for the	2. Electrodes for Grade 60 or Grade 65 material shall conform to E80XX (SMAW), F8XX-EXX-XX (SAW), ER80S-X (GMAW), or E8XT-X (FCAW).	2. The contract finished stru indicate the
ss than that required for the in which the headed shear stud tructural members not specified shall	E. ANCHOR RODS1. Unless indicated otherwise in the Column Schedule or on the	construction 3. Openings thr
lls or columns shall match	drawings, anchor rods shall conform to ASTM F 1554 Grade 55 (with Supplementary Requirement S1) and the size shall be 3/4" diameter and shall embed into the concrete foundation a distance of 1'-O" with a heavy hex nut at the embedded end. Strike bolt threads at the embedded end at two places below the nut.	and/or condu verify sizes Electrical, subcontracto
f the specified of the specified otherwise on the drawings. All bars , unless noted otherwise.	F. GROUT 1. Grout below structural steel base plates shall be non-metallic.	4. Refer to draw including: Ty depressions
For Unschodulad Deems Clabs	non-shrink grout with a minimum strength of 6,000 psi when bearing on 3,000 psi concrete or less, a strength of 8,000 psi when bearing on concrete between 3,000 and 4,000 psi, and, unless noted otherwise on the	5. Where member
For Unscheduled Beams, Slabs eams and slabs, including grade op bars lapped at midspan between	drawings, a strength of 8,000 psi when bearing on concrete greater than 4,000 psi.	6. If certain f
tension splice. Bottom bars shall be lapped tension splice. All beam bars shall unless noted otherwise.	PART V - SPECIAL INSPECTIONS	B. DRAWING CONFLICTS
ween supports with a Class B tension posite the dirt face side shall be Class B tension splice. Horizontal	A. The Owner's testing laboratory shall provide special inspection services in accordance with the International Building Code for the following items	1. The General Structural d
ion splice.	B. Special inspection reports and a final report in accordance with IBC Section 1704.2.4 shall be submitted to the building official prior to the	drawings and prior to the
	time that phase of the work is approved for occupancy. 1. Steel Construction:	1. Where conflicted doc
	 a. All Field Welding b. High-Strength Bolting c. Inspection of Structural Steel, Bolting, Welding Material 	specification Engineer, sh
	 a. Weiding of Structural Steel 2. Concrete Construction: a. Bolts Installed in Concrete 	D. EXISTING CONDITIO
	 bolts installed in concrete b. Concrete Work c. Continuous Inspection of Reinforcing Steel Placing d. Epoxy Bolts 	of the exist from assumed Engineer pri
	e. Formwork f. Reinforcing Steel Placement g. Welding of Reinforcing Steel	2. Work shown of
	3. Soils: a. Prepared Earth Fill	existing con existing con drawings of However, the
	<pre>4. Deep Foundations: a. Pier Foundations</pre>	necessarily information.
	 Sprayed Fire-Resistant Materials Mastic and Intumescent Fire-Resistant Coatings 	 Demolition, performed wi integrity of
	7. Wind Requirements: a. Main Windforce-Resisting Systems	MEP members Architect sh removal of t
	 b. Roof Cladding c. Windforce-Resisting System Connections to Foundation d. Wind-Resisting Components 	5. The contract existing sup shoring meth of the contr
	C. STATEMENT OF SPECIAL INSPECTIONS	6. The contract prior to the
	1. Special inspection is required for the items listed above. Refer to Specification Section 014529 for type and extent of each special inspection and each test. The Specification also indicates whether	7. The contract
	continuous or periodic inspection is required for the items listed above additional information.	acceptable to
		1. The General used will no
		shall includ 2. The General
		surveys and start of and

BMITTALS	PART VII - MISCELLANEOUS (CONTINUED)
<pre>BMITTALS ND SCHEDULE Contractor shall prepare a detailed list and schedule ttal items to be sent to the Structural Engineer prior to construction. This list shall be updated and revised and as the job progresses. The submittal list shall be shown below: awings Calculations Data, Certificates, Reports, and Other Literature PROVIDED TO STRUCTURAL ENGINEER ubmittals: In addition to the submittals required by al specifications, the following submittals shall be of Embedded Items (Plates, Angles, Bolts, etc.) or ttached to the Structural Frame for Building Cladding ent or for Attachment of Other Items. mittals: lowing items are considered deferred submittals by the red design professional in responsible charge: avation Retention (Permanent) (S&S) avation Retention (Temporary) (S&S, REC) ting Structural Steel, Cable, and Net (S&S) al Fabrications, Railings, and Gratings (S&S) uctural Steel Connections (S&S) ms marked thus shall have the shop drawings and sign submittals (including calculations) sealed per the ifications by an engineer registered in the state where is located. </pre>	 PART VII - MISCELLANEOUS (CONTINUED) F. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION 1. All structural elements of the project have been designed by the structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. The ability of the structural frame to resist the required code forces derives from the complete installation of the lateral force resisting systems and diaphragms described below. It is the responsibility of the contractor to design and provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and all designated concrete elements (if any) have reached a minimum of 75% of their design strength. This includes designing for all applicable temporary, construction and environmental forces per ASCE 37 including but not limited to wind and seismic on the structure during construction. The required structural elements are: Biere caps Structural steel poles 6. RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION LOADS 6. RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION LOADS 6. RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION LOADS
<pre>ms marked thus shall be submitted to Engineer for and will not have the Engineer's shop drawing stamp ts for deferred submittal items shall be submitted to istered design professional and shall be forwarded to the g official. d submittal items shall not be installed until the d submittal documents have been approved by the building l. with Impact to Structure: cal Equipment Weights quirements: o drawings must be reviewed and electronically stamped General Contractor prior to submittal. tor shall provide the submittal in electronic portable t format (PDF) per the Specifications. ssion from the shop drawings of any materials required Contract Documents to be furnished shall not relieve the tor of the responsibility of furnishing and installing such ls, regardless of whether the shop drawings have been d and approved.</pre>	 construction loads that are in excess of the stated design loads. The Structural Engineer is not responsible to design or check the structure for loads applied to the structure for any construction activity. H. CONTRACTOR SUBSTITUTIONS Any materials or products submitted for approval that are different from the material or products specified in the structural contract documents will be approved only if the following criteria are satisfied: A cost savings to the Owner is documented and submitted with the request. The material or product has been approved by the International Code Council (ICC) and the ICC report is submitted with the request. The ICC ESR that is submitted must reference the building code under which the project is permitted. ICC reports that have been discontinued at the time of product installation will not be accepted. Submittals not satisfying the above criteria will not be considered. MECHANICAL EQUIPMENT WEIGHTS The General Contractor shall submit actual weights of equipment to
<pre>lectronic files or reproductions of these contract any contractor, subcontractor, erector, fabricator, or plier in lieu of preparation of shop drawings signifies ance of all information shown hereon as correct, and emselves to any job expense, real or implied, arising due to hat may occur hereon. SCELLANEOUS TS sponsibility of the General Contractor to obtain all uments and latest addenda and to submit such documents to actors and material suppliers prior to the submittal of shop brication of any structural members, and erection in the structural drawings and specifications represent the ucture, and, except where specifically shown, do not method or means of construction. The Contractor shall d direct the work and shall be solely responsible for all means, methods, procedures, techniques, and sequence. ough floors, roofs, and walls for ducts, piping, it shall be coordinated by the contractor. Contractor shall and locations of holes and openings with the Mechanical, Plumbing, and Fire Protection drawings and the respective rs. wings other than Structural for complete information ypes of floor slab finishes and their locations, floor slab and curbs, openings in structural walls, roofs and floors Architectural and MEP features, stairs, ramps, etc. · locations are not specifically dimensioned, members ocated on columns lines or are equally spaced between ers. eatures are not fully shown or specified on the in the specifications, their construction shall be of the er as shown or specified in similar conditions.</pre>	 h. Michael and the superior of the Structural Engineer for verification of loads used in the design at least three weeks prior to fabrication and construction of the supporting structure. J. THE STRUCTURAL ENGINEER'S ROLE DURING CONSTRUCTION The Engineer shall not have control nor charge of, and shall not be responsible for, construction means, methods, techniques, sequences, or procedures, for safety precautions and programs in connection with the work, for the acts or omission of the Contractor, Subcontractor, or any other persons performing any of the work, or for the failure of any of them to carry out the work in accordance with the contract documents. Periodic site observation by field representatives of Walter P. Moore and Associates is solely for the purpose of becoming generally familiar with the progress and quality of the Work completed and determining, in general, if the Work observed is being performed in a manner indicating that the Work, but rather periodic in an effort to keep the Owner reasonably informed about the progress and quality of the purgess and quality of the purges of octinity of the portion of the structure completed. K. MAINTENANCE STATEMENT All structures require periodic maintenance to extend lifespan and to ensure structural integrity from exposure to the environment. A planned program shall include such items such as but not limited to painting of structural steel, protective coating for concrete, sealants, caulked joints, expansion joints, control joints, spalls and cracks in concrete, and pressure washing of exposed structural elements exposed to a salt environment or other harsh chemicals.
S Contractor shall compare the Architectural and rawings and report any discrepancy between each set of within each set of drawings to the Architect and Engineer fabrication and installation of any structural members. JCTURAL REQUIREMENTS ct exists among the various parts of the structural uments, structural drawings, general notes, and ns, the strictest requirements, as indicated by the all govern. DNS Contractor shall verify all dimensions and conditions ing building at the job site and report any discrepancies conditions shown on the drawings to the Architect and or to the fabrication and erection of any members. In the drawings is New, unless noted as Existing. struction shown on the drawings was obtained from struction documents and limited site observation. These existing construction are available for contractor use. available drawings of existing construction are not complete. The contractor shall field verify all pertinent cutting, drilling, etc. of existing work shall be th great care so as not to jeopardize the structural the existing building. If any architectural, structural, or not designated for removal interfere with the new work, the all be notified immediately and approval obtained prior to hose members. or shall safely shore existing construction wherever ports are removed to allow the installation of new work. All ods and sequencing of demolition shall be the responsibility actor and their engineer. or shall verify the location of existing utilities start of construction and take care to protect existing at are to remain in service. or shall repair all damage caused during construction materials and workmanship to restore conditions to levels o the Architect. S AND PROPERTY Contractor shall ensure that all construction methods t cause damage to the adjacent buildings and property. This e all foundation installation.	PART VIII - DRAWING INTERPRETATION A. DRAWING VIEWS LABELED AS "TYPICAL" 1. Partial plans, elevations, sections, details, or schedules labeled with "Typical" at the beginning of their title shall apply to all situations occurring on the project that are the same or similar to these specifically shown. The applicability of the content of these views to locations on the plan can be determined from the title of the views. Such views shall apply whether or nor they are keyed in a teach location. Decisions regarding applicability of these "Typical" views shall be determined by the Structural Engineer.

ral Contractor is advised to perform all photographic and other documentation of the adjacent buildings before the and during construction.

Walter P Moore and Associates, Inc. 500 N Akard Street, Suite 2300 Dallas, Texas 75201

214.740.6200

Project :

UNT ADVANCED AIR MOBILITY (UAAM) TEST CENTER

^{Client :} University of North Texas Discovery Campus 3940 N Elm Street Denton, TX 76207

Consultants /

Issue	s/Revisions		
		BID SET	
No.	Date	Descriptio	
Proje	ct UNT UA	.∨ Drawn By∶ MSN	
Proje Appro	ct Number	M04-22008-00 Checked By : WMD	
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		WILLIAM M. DECKER	
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to the and co	forgoing restri	ictions and that this document will be held in ject only to the private use expressly
by Wa	ing Title	and Associates,
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		JZ.U I

THE FOUNDATION DESIGN INCLUDED HEREIN IS BASED UPON THE FOLLOWING DESIGN BASIS FOUNDATION LOADS:											
	AXIAL (VERTICAL) (KIPS)	SHEAR (HORIZONTAL) (KIPS)	MOMENT (KIP-FEET)								
CORNER POLE BASE (4 LOCATIONS)	650 (DOWN)	50 (ANY DIRECTION)	270 (ANY DIRECTION)								
INTERIOR POLE BASE (14 LOCATIONS)	130 (DOWN)	50 (ANY DIRECTION)	270 (ANY DIRECTION)								
CORNER GUY-WIRE TIE-DOWN (8 LOCATIONS)	510 (UPLIFT)	330 (IN DIRECTION OF CABLE)	0								
INTERIOR GUY-WIRE TIE-DOWN (14 LOCATIONS)	110 (UPLIFT)	65 (IN DIRECTION OF CABLE)	0								

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UNT ADVANCED AIR MOBILITY (UAAM) TEST CENTER

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Keyplan

Issues/Revisions												
	BID SET											
No.	Date	Descriptio										
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Appro	oved WMD	Checked By: WMD										
Certif	fication State	ement :										
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THE	APPLICABI	E MINIMUM BUILDING CODES.										
Seal	and Signatu	TE OF TANK										
		WILLIAM M. DECKER										
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		CENSE 10/07/2022										
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	FOUNDATION LAP SPLICE LENGTHS GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE													
	LAP CLASS	f'c = 30	00 PSI	f'c = 40	00 PSI	f'c = 50	00 PSI	f'c = 60	00 PSI	f'c = 70	00 PSI	f'c = 8000 PSI		
BAR SIZE		S BOTTOM OTHER BOTTOM OTHER BOTTOM BARS BARS BARS		OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS				
#5	А	17	22	15	19	13	17	12	16	12	14	12	14	
#5	В	22	28	19	25	17	22	16	20	16	19	16	18	
#6	А	20	26	18	23	16	20	14	19	13	17	13	16	
#0	В	26	34	23	29	20	26	19	24	17	22	16	21	
<u> 47</u>	А	29	38	25	33	23	29	21	27	19	25	18	23	
#1	В	38	49	33	43	29	38	27	35	25	32	23	30	
#0	А	33	43	29	37	26	34	24	31	22	28	21	27	
#0	В	43	56	37	49	34	44	31	40	28	37	27	35	
#0	А	41	54	36	46	32	42	29	38	27	35	25	33	
#9	В	54	69	46	60	42	54	38	49	35	46	33	43	
#10	А	51	66	44	57	39	51	36	47	33	43	31	41	
#10	В	66	85	57	74	51	66	47	61	43	56	41	53	
#11	А	61	79	53	68	47	61	43	56	40	52	37	49	
#11	В	79	103	68	89	61	80	56	73	52	67	49	63	

- NOTES: 1. ALL SPLICE LENGTHS ARE IN INCHES. 2. THIS TABLE SHALL ONLY BE USED FOR FOUNDATION LAP SPLICE LENGTHS OF BARS MEETING THE REQUIREMENTS IN NOTES 3 THROUGH 5.
- 3. CENTER TO CENTER SPACING OF BARS SHALL NOT BE LESS THAN 4". 4. WHERE BAR SPACING IS LESS THAN 8", LAP SPLICES AT ALL LOCATIONS SHALL BE STAGGERED.
- 5. CONCRETE COVER TO THE SPLICED BARS SHALL NOT BE LESS THAN 2" (CLEAR). 6. A BOTTOM BAR IS DEFINED AS ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH
- CONCRETE BELOW THE BAR. 7. OTHER BARS INCLUDE TOP BARS AND ALL OTHER BARS THAT HAVE MORE THAN 12" OF
- FRESH CONCRETE BELOW THE BAR. 8. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF BOTTOM BARS BY 1.5 AND THE TABULATED SPLICE
- LENGTHS OF OTHER BARS BY 1.3. 9. WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE
- LARGER BAR. 10. FOR CONCRETE STRENGTHS IN BETWEEN THOSE TABULATED HERE, USE DEVELOPMENT AND LAP SPLICE LENGTHS OF LOWER CONCRETE STRENGTH.

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TYPICAL FOUNDATION LAP SPLICE LENGTHS

DRILLED PIER REINFORCEMENT SCHEDULE											
PIER ID	DIAMETER (INCHES)	VERTICAL REINFORCEMENT	TIES	BATTER ANGLE FROM VERTICAL (DEGREES)							
P42	42	10-#11	#4@4"	0 (NO BATTER)							
P48	48	14-#11	#4@10"	0 (NO BATTER)							
P60	60	20-#11	#4@12"	30							

walter p moore

Walter P Moore and Associates, Inc. 500 N Akard Street, Suite 2300 Dallas, Texas 75201

214.740.6200

Project :

UNT ADVANCED AIR MOBILITY (UAAM) TEST CENTER

Client : University of North Texas Discovery Campus 3940 N Elm Street Denton, TX 76207

Consultants /

lssue	Issues/Revisions											
	BID SET											
No.	Date	Descriptio										
Proje	ct UNT UA	V Drawn By : MSN										
Proje	ct Number	M04-22008-00 Checked By : WMD										
Certil TO T	fication State HE BEST C	ement : F THE ENGINEER'S KNOWLEDGE,										
THE THE	PLANS ANI APPLICABL	D SPECIFICATIONS COMPLY WITH LE MINIMUM BUILDING CODES.										
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	Walte	r P. Moore and Associates, Inc										
	TBP	E Firm Registration No. 1856										
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by Wa	alter P. Moore	and Associates,										
Draw	ring Title:											
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	SEC	CTIONS AND										
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٨٥٥			ABBREVIATIONS, SYMBULS, AND NUTES	
AC ADO AF AFC AFF AT ATS C CB,C/B,CKT BKR CKT CLG D DC DP EG ELEC E, EM EP EWC EX F FA FA FAA FACU FCU FCU FCU FL GGND GEN GFI/GFCI HP HV, H IG JB, JBOX, J-BOX LTG LV MCA MCB MCC MDP MH MLO MTD MTD MTD MTD MTA HTU NFSS P PH PNL POD PWR R R RECEPT, RCPT TEL TR NFS P PH PNL POD PWR R R RECEPT, RCPT TEL TR TV UH UON V V FD VP W W/ W/ W/ W/ W/ W/ W/ W/ W/ W/ W/ W/ W	REVIATIONS ALTERNATING CURRENT AUTOMATIC DOOR OPENER AMPERE FRAME ABOVE FINISHED COUNTER ABOVE FINISHED FLOOR AMPERE TRIP AUTOMATIC TRANSFER SWITCH CONDUT CIRCUIT BREAKER CIRCUIT CIRCUIT BREAKER CIRCUIT CELLING DEMOLITION DIRECT CURRENT DISTRIBUTION PANEL EQUIPMENT GROUND ELECTRIC EXSTING FUSE FIRE ALARM FIRE ALARM ANNUNCIATOR FIRE ALARM CONTROL UNIT FAN COIL UNIT FAN COIL UNIT FULL LOAD AMPS FAN TERMINAL UNIT GROUND GENERATOR GROUND FAULT CIRCUIT INTERRUPTER HORSE POWER HIGH VOLTAGE PANEL (120/2089) MINIMUM CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN DISTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN MOLE MAIN USTRIBUTION PANEL MAIN MOLE MAIN USTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN USTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN DISTRIBUTION PANEL MAIN MAIN PANEL MAIN DISTRIBUTION PANEL MAIN MAIN PANEL MAIN MAI	LIGHT FIXTURES PRUE HAT FIXTURE PRUE HAT FIXTURE </td <td>ABBREVIATIONS, SYMBOLS, AND NOTES SWITCHES & MISC.</td> <td><text><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></text></td>	ABBREVIATIONS, SYMBOLS, AND NOTES SWITCHES & MISC.	<text><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></text>
		ONE AMPS/POLES / SWITCH AMPS/POLES FUSE AMPS/POLES MOLDED CASE CIRCUIT BREAKER AMPS/POLES DRAW OUT CIRCUIT BREAKER AMPS/POLES DRAW OUT CIRCUIT BREAKER LSI LSI LSI LSI LSI LSI LSI LSI	LINE/RISER DIAGRAM GROUND ROD AMPS/POLES Image: Second Constraints Image: Second Constraints METER Image: Second Constraints METER Image: Second Constraints GROUND FAULT RELAY Image: Second Constraints GROUND FAULT RELAY Image: Second Constraints FRAME RATING Image: Second Constraints Image: Second Constraints Image: Second Constraints Image: Second Constraints <t< td=""><td> IN INSTRUCES WHERE A DUMINING SYSTEM, AND/OR LIGHTING CONTROL SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL COORDINATE ALL NECESSARY ACCESSORIES TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM. LIGHTING CONTROLS WHERE REQUIRED BY THE CURRENTLY ADOPTED ENERGY CODE TO BE PROVIDED WHERE APPLICABLE. SEE LIGHTING PLANS. ALL LIGHT FIXTURES SHALL BE INSTALLED WITH APPROPRIATE LEDS AS INDICATED. OUTLETS AND POWER DEVICES CONTRACTOR SHALL VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PROF. TO ELECTRICAL ROUGH.IN. ALL LIGHT FIXTURES SHALL BE INSTALLED WITH APPROPRIATE LEDS AS INDICATED. CONTRACTOR SHALL VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PROF. TO ELECTRICAL ROUGH.IN. ALL RECEPTACLES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL BE HOUSED IN ENCLOSURES THAT ARE RATED WATHER PROF. WHILE-IN-USE' AND SHALL BE TAMPER RESISTANCE AND EQUIPPED WITH GFCI FOR PERSONNEL RETOCTON. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLE DO NOT DE-ENERGIZE UPON TRIPPING, ALL GFCI RECEPTACLES SHALL MOLDE A LICX/OUT FUNCTION TO PROFECTION. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON DEVICES THAT HAVE BEEN DAMAGED DUE TO DE-ENERGIZE UPON TRIPPING, ALL GFCI RECEPTACLES SHALL MOLDE A LICX/OUT FUNCTION TO PROFECTION. FINISH COLORS OF DEVICES AND CORRESPONDING COVER PLATES SHALL BE SELECTED AND APPROVED BY THE ARCHTEC. SPECIALLT RECEPTACLES AND COVERPLATES (IL. ISOLATED GROUND, EMERGENCY, CRITICAL BRANCH, SURGE SUPPRESSION, ETC.) SHALL BE THE COLOR NOTED IN ELECTRICAL CONSTRUCTION DOCUMENTS. T</td></t<>	 IN INSTRUCES WHERE A DUMINING SYSTEM, AND/OR LIGHTING CONTROL SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL COORDINATE ALL NECESSARY ACCESSORIES TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM. LIGHTING CONTROLS WHERE REQUIRED BY THE CURRENTLY ADOPTED ENERGY CODE TO BE PROVIDED WHERE APPLICABLE. SEE LIGHTING PLANS. ALL LIGHT FIXTURES SHALL BE INSTALLED WITH APPROPRIATE LEDS AS INDICATED. OUTLETS AND POWER DEVICES CONTRACTOR SHALL VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PROF. TO ELECTRICAL ROUGH.IN. ALL LIGHT FIXTURES SHALL BE INSTALLED WITH APPROPRIATE LEDS AS INDICATED. CONTRACTOR SHALL VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PROF. TO ELECTRICAL ROUGH.IN. ALL RECEPTACLES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL BE HOUSED IN ENCLOSURES THAT ARE RATED WATHER PROF. WHILE-IN-USE' AND SHALL BE TAMPER RESISTANCE AND EQUIPPED WITH GFCI FOR PERSONNEL RETOCTON. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLE DO NOT DE-ENERGIZE UPON TRIPPING, ALL GFCI RECEPTACLES SHALL MOLDE A LICX/OUT FUNCTION TO PROFECTION. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON DEVICES THAT HAVE BEEN DAMAGED DUE TO DE-ENERGIZE UPON TRIPPING, ALL GFCI RECEPTACLES SHALL MOLDE A LICX/OUT FUNCTION TO PROFECTION. FINISH COLORS OF DEVICES AND CORRESPONDING COVER PLATES SHALL BE SELECTED AND APPROVED BY THE ARCHTEC. SPECIALLT RECEPTACLES AND COVERPLATES (IL. ISOLATED GROUND, EMERGENCY, CRITICAL BRANCH, SURGE SUPPRESSION, ETC.) SHALL BE THE COLOR NOTED IN ELECTRICAL CONSTRUCTION DOCUMENTS. T

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Project :

Client : University of North Texas Discovery Campus 3940 N Elm Street Denton, TX 76207

Consultants / Discipline :

Keyplan :

Filename : Sheet No. :

E0.01

01 LIGHTING PLAN SCALE: 1" = 30 '- 0"

	LIGHT FIXTURE SCHEDULE													
TYPE	SIZE	DESCRIPTION	FINISH	MOUNTING	CCT	LUMENS	HOURS	WATTS	UNITS	DRIVER	VOLTAGE	MANUFACTURER	CATALOG NUMBER	NOTES
		AREA SITE		20FT ON						0-10V				
S1	26" X 13"	LIGHT	BLACK	NET POLE	5000	10,466	100,000	92	EACH	DIMMING	MVOLT	LITHONIA	DSX0-LED-P4-50K-T4M-MVOLT-RPA-DBLXD	
		AREA SITE		20FT ON						0-10V				
S1L	26" X 13"	LIGHT	BLACK	NET POLE	5000	6,523	100,000	92	EACH	DIMMING	MVOLT	LITHONIA	DSX0-LED-P4-50K-LCCO-MVOLT-RPA-DBLXD	
		AREA SITE		20FT ON						0-10V				
S1R	26" X 13"	LIGHT	BLACK	NET POLE	5000	6,523	100,000	92	EACH	DIMMING	MVOLT	LITHONIA	DSX0-LED-P4-50K-RCCO-MVOLT-RPA-DBLXD	
		AREA SITE		10FT ON						0-10V				
S2	26" X 13"	LIGHT	BLACK	NET POLE	5000	4,771	100,000	38	EACH	DIMMING	MVOLT	LITHONIA	DSX0-LED-P4-50K-TFTM-MVOLT-RPA-DBLXD	
GENERA	L NOTES:			•										
1- ALL RE	EQUESTS F	OR SUBSTITUTIC	NS/ALTER	NATES MUST	FBE SUBM	ITTED TO E	INGINEER	7 DAYS P	RIOR TO	BID FOR AP	PROVAL. AL	L SUBMISSIONS SI	HALL INCLUDE DETAILED CUT SHEETS AND PERFORMANCE	DATA

	LIGHTING NOTES:
1.	LIGHT FIXTURES TO HAVE INTEGRAL DAYLIGHT SENSOR AND MOTION SENSOR. AFTER 15 MIN OF INACTIVITY, LIGHTS TURN OFF. LIGHTS MANUALLY TURNED ON WITH KEYED SWITCH ONLY IF <3FC.
2.	SUBMIT LIGHTING PLAN TO Facilities.GIS@unt.edu.
	LIGHTING KEYED NOTES:
1.	RUN 2#10, #10G3/4"C. TO 1P/20A CIRCUIT BREAKER CIRCUIT AS SHOWN VIA TIME CLOCK.

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Consultants / Discipline :

Keyplan :

Filename : Sheet No. : E1.01

01 **POWER PLAN** SCALE: 1' = 30' - 0"

TRUE NORTH

	POWER NOTES:
1.	MOUNT PANEL ON UNISTRUIT.
2.	ALL RECEPTACLES TO BE TR/ WP/GFI.
	POWER KEYED NOTES:
1.	ROUTE CONDUIT IN PLENUM AROUND BLAST PROOF ROOM H155.
2.	MOUNT CONDUIT TO EXTERIOR OF BUILDING AT PLENUM HEIGHT.
3.	DIRECT BURY CONDUIT UNDERGROUND WITH TOP OF CONDUIT TO BE MINIMUM OF 24" BELOW GRADE. COORDINATE WITH EXISTING UNDERGROUND UTILITIES.
4.	EXISTING CSA PANEL WITH SPARE BREAKER.
5.	PROVIDE 1500W 5G EQUIPMENT AT 3FT ABOVE GROUND ON EXTERIOR OF POLE.
6.	PROVIDE (2) DUPLEXES AT POLE MOUNTED AT 3FT AND 10FT ABOVE GROUND. TYPICAL ALL POLES WITH (2) DUPLEXES.
7.	NEW PANEL 'D' MOUNTED ON UNISRUIT. REFER TO SHEET E3.01 FOR ADDITIONAL INFORMATION.
8.	NEW TRANSFORMER 'XFR-D' SET ON TOP OF PAD 8" ABOVE FINAL GRADE. REFER TO SHEET E3.01 FOR ADDITIONAL INFORMATION. PROVIDE 3.5FT CLEAR IN FRONT OF XFR.
9.	PROVIDE 120V,1P,20A DEDICATED CIRCUIT TO DATA SWITCH.
10.	PROVIDE 120V,1P,20A DEDICATED CIRCUIT TO UPS.
11.	PROVIDE 3/4"X 10FT GROUND ROD. TIE TRANSFORMER TO GROUND ROD VIA GROUNDING CONDUCTOR.
12.	DUPLEXES MOUNTED IN LOW VOLTAGE CABINET. REFER TO T1.01 FOR EXACT LOCATION.
13.	PROVIDE INTERMATIC ET 8015C TIME CLOCK IN LOCKABLE NEMA 3R ENCLOSURE.

14. ADD ALT #1: PROVIDE (2) DUPLEXES AT POLE MOUNTED AT 3FT AND 10FT ABOVE GROUND.

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01 ELECTRICAL ONE-LINE DIAGRAM

	MAIN SIZE:	100	А	MAIN T	YPE:	60 MC	В					SECTI	ON 1	P	ANEL	NAME:	D			
	AIC RATING:	10	,000	MOUN	TING:	SURF/	ACE					VOLTA	AGE:	208	/120V	3PH,4\	N			
		AMPS			LOAD ((KVA)								LOAD (KVA)			AMPS		
	DESCRIPTION	POLE	LTG	RCPT	MTR	HEAT	KITCH	MISC				MISC	KITCH	HEAT	MTR	RCPT	LTG	POLE	DESCRIPTION	
1	POLE LIGHTS CKT W	20/1	0.40						1	А	2						0.40	20/1	POLE LIGHTS CKT E	2
3	RECEPTS. CKT SW	20/1		0.36					3	В	4					0.36		20/1	RECEPTS. CKT S	4
5	5G EQUIP	20/1		1.50					5	С	6	1.00						20/1	SWITCH	6
7	UPS	20/1						1.00	7	А	8					0.36		20/1	RECEPTS. CKT S	8
9	RECEPTS. CKT SE	20/1		0.36					9	В	10	1.00						20/1	SWITCH. CKT S	10
11	RECEPTS. CKT NE	20/1		0.36					11	С	12					0.36		20/1	RCPT-NORTH 1	12
13	RECEPTS. CKT NE	20/1		0.36					13	А	14					0.36		20/1	RCPT-NORTH 2	14
15	TIME CLOCK 1	20/1						0.01	15	В	16					0.36		20/1	RCPT-NORTH 3	16
17	TIME CLOCK 2	20/1						0.01	17	С	18					0.36		20/1	RCPT-NORTH 4	18
19	RCPT-WEST 1	20/1		0.36					19	А	20					0.36		20/1	RCPT-EAST 1	20
21	RCPT-WEST 2	20/1		0.36					21	В	22					0.36		20/1	RCPT-EAST 2	22
23	RCPT-SOUTH 1	20/1		0.36					23	С	24							20/1	SPACE	24
25	RCPT-SOUTH 2	20/1		0.36					25	А	26							20/1		26
27	RCPT-SOUTH 3	20/1		0.36					27	В	28							20/1		28
29	RCPT-SOUTH 4	20/1		0.36					29	С	30							20/1		30
31		20/1							31	А	32							20/1		32
33		20/1							33	В	34							20/1		34
35		20/1							35	С	36							20/1		36
37	SPD	20/3							37	A	38							20/1		38
39	-	-							39	В	40							20/1		40
11	-	-							41	С	42							20/1		42
	TOTAL AMPS:	33.3	0.40	5.10	0.00	0.00	0.00	1.02				2.00	0.00	0.00	0.00	2.88	0.40			

REMARKS: 1. PROVIDE FACTORY MOUNTED 'SPD'.

	LO	AD (KV	A)	CONN.		DESN
LOAD	А	В	С	KVA	MULT	KVA
LIGHTING	0.80	0.00	0.00	0.80	1.25	1.00
RECEPTACLE	2.16	2.52	3.30	7.98	NEC	7.98
MOTOR	0.00	0.00	0.00	0.00	NEC	0.00
LARGEST MOTOR	HP:	1	FLC	4.60		8.00
VOLT/I	PHASE:	208/3	KVA	1.66		9.00
HEAT	0.00	0.00	0.00	0.00	1.00	0.00
KITCHEN	0.00	0.00	0.00	0.00	0.65	0.00
MISCELLANEOUS	1.00	1.01	1.01	3.02	1.00	3.02
TOTAL	3.96	3.53	4.31	11.80		12.00
SPARE	0	AT	0.5	EA	=	0.0
TOTAL + SPARE						12.0

33.3	TOTAL DESN AMPS:
60	Next Standard Bus Rating:
35	Next Standard Trip Rating:
100	SELECTED TRIP RATING:
	CALC. FAULT AT PNL:
0	Next Standard AIC Rating:
10	SELECTED AIC RATING:
XXX	PROJECT NAME:
XXXX	PROJECT NUMBER:

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Project

Client : University of North Texas Discovery Campus 3940 N Elm Street Denton, TX 76207

Consultants / Discipline :

07 WALL MOUNTED CONDUIT SUPPORT DETAIL SCALE: NONE

WATERTIGHT CONDUIT 08 PENETRATION - EXISTING STRUCTURE SCALE: NONE

04 GFCI RECEPTACLE WIRING DIAGRAM

05 PANELBOARD CLEARANCE DETAIL

- REFER TO NEC ARTICLE 110.26(E)(1)(a) THROUGH 110.23(E)(1)(d) FOR DEDICATED Q EQUIPMENT SPACE FOR ELECTRICAL EQUIPMENT 600V OR LESS.
- REFER TO NEC ARTICLE 110.26(A)(3) FOR HEIGHT OF WORKING SPACE FOR 3 ELECTRICAL EQUIPMENT 600V OR LESS.
- (2) REFER TO NEC ARTICLE 110.26(A)(2) FOR WIDTH OF WORKING SPACE FOR ELECTRICAL EQUIPMENT 600V OR LESS.
- NOTES BY SYMBOL: REFER TO NEC ARTICLE 110.26(A)(1)(a) THROUGH 110.26(A)(1)(c) FOR DEPTH OF WORKING SPACE FOR ELECTRICAL EQUIPMENT 600V OR LESS.

02 TRANSFORMER FLOOR MOUNTED DETAIL

01 TRANSFORMER FLOOR MOUNTED DETAIL

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ABBREVIATIONS:			TELECOMMUNICATIONS		
ACS			×	TYPICAL FOUR-PAIR UTP DROP LOCATION (X IDENTIFIES QUANTITY OF	
AP AV	ACCESS POINT AUDIOVISUAL		POS x	POS FOUR-PAIR UTP DROP LOCATION (x IDENTIFIES QUANTITY OF	
AWG AXT BACNET	AMERICAN WIRE GAUGE ALIEN CROSSTALK BUILDING AUTOMATION AND CONTROL NETWORH	к	W x	WALL-MOUNTED FOUR-PAIR UTP DROP LOCATION (X IDENTIFIES	
BAS BCT	BUILDING AUTOMATION SYSTEMS BONDING CONDUCTOR FOR TELECOMMUNICATION	ONS	•	QUANTITY OF JACKS AND ASSOCIATED CABLING DROPS). TYPICAL 48"AFF.	
BICSI CAT CATV	BUILDING INDUSTRY CONSULTING SERVICES INT CATEGORY CABLE TV	ERNATIONAL	×	FLUSH FLOOR-MOUNTED FOUR-PAIR UTP DROP LOCATION (X IDENTIFIES QUANTITY OF JACKS AND ASSOCIATED CABLING DROPS) TYPICAL 49"AFE	
CCTV CM	CLOSED-CIRCUIT TV COMMON MODE		PRJ⊥x	CEILING MOUNTED PROJECTOR FOUR-PAIR UTP DROP LOCATION	
CMP CMR COW	COMMUNICATIONS PLENUM CABLE COMMUNICATIONS RISER CABLE COMPLITER ON WHEELS			(X IDENTIFIES QUANTITY OF JACKS AND ASSOCIATED CABLING DROPS). TYPICAL 48"AFF.	
CPU DAS	CENTRAL PROCESSING UNIT DISTRIBUTED ANTENNA SYSTEM			POWER OVER ETHERNET (IP-BASED CAMERA)	
DBA DBU DM	A-WEIGHTED DECIBEL DECIBEL UNIT DIEEERENTIAL MODE		BC x	BIO-CLOCK. TYPICAL 48"AFF.	
DP DSP	DEMARCATION POINT DIGITAL SIGNAL PROCESSOR			CABLE TRAY	
DSX DVR	DIGITAL SIGNAL CROSS-CONNECT DIGITAL VIDEO RECORDER				
EF	ENTRANCE FACILITY ELECTRONIC INDUSTRIES ALLIANCE				
EMI EMS	ELECTROMAGNETIC INTERFERENCE ENERGY MANAGEMENT SYSTEM				
EOLR EPO ESD	END-OF-LINE RESISTOR EMERGENCY POWER OFF ELECTROSTATIC DISCHARGE			SECURITY	
ESS FACP	ELECTRONIC SECURITY AND SAFETY FIRE ALARM CONTROL PANEL		Σ	EXTERIOR FIXED MULTISENSOR CAMERA	
FDC FO FOC	FIBER DISTRIBUTION CENTER (RACK OR WALL MO FIBER OPTIC FIBER OPTIC CABLE	OUNTED)	CAM ◀ 110°	EXTERIOR FIXED 110 DEGREE CAMERA	
FTP GC	FOIL TWISTED-PAIR GENERAL CONTRACTOR			INTERIOR FIXED 180 DEGREE CAMERA	
GEC GUI	GROUNDING ELECTRODE CONDUCTOR GRAPHICAL USER INTERFACE HORIZONTAL CROSS-CONNECT		(CAM) 360	INTERIOR FIXED 360 DEGREE CAMERA	
HDMI HDTV	HIGH-DEFINITION MULTIMEDIA INTERFACE HIGH DEFINITION TV		ES		
HH IBC	HANDHOLE INTERNATIONAL BUILDING CODE INTERMEDIATE CROSS.CONNECT		DS	DOOR SWITCH	
ICT ID	INFORMATION AND COMMUNICATIONS TECHNOLO INTERACTIVE DISPLAY	OGY	CR	CARD READER	
IDF IDS	INTERMEDIATE DISTRIBUTION FRAME INTRUSION DETECTION SYSTEMS		DR	DOOR RELEASE	
ISP IT	INTERNET FROTOCOL INSIDE PLANT INFORMATION TECHNOLOGY		ACC	ACCESS CONTROLLER LOCATION	
KVM LAN	KEYBOARD/VIDEO/MOUSE LOCAL AREA NETWORK		₩AI AI □ î	AIPHONE INTERCOM (1-CAT6 DROP) AIPHONE CONSOLE	
LED	LIGHT-EMITTING DIODE LOW VOLTAGE DISCONNECT		IDS	INTRUSION DETECTION SYSTEM PANEL	
MC MDF	MAIN CROSS-CONNECT MAIN DISTRIBUTION FRAME		MD	CEILING MOUNTED MOTION DETECTOR	
MM MPP	MULTIMODE MULTIPURPOSE PLENUM CABLE		DPS	DOOR POSITION SWITCH (IDS)	
MPR NIC	MULTIPURPOSE RISER CABLE NETWORK INTERFACE CARD		(S) p	SENSOR PUBLIC ADDRESS SYSTEM CONSOLE	
NIST NVR OFNP	NATIONAL INSTITUTE OF STANDARDS AND TECH NETWORK VIDEO RECORDER OPTICAL FIBER NON-CONDUCTIVE PLENUM	NOLOGY	△ PA PA (◯	EXTERIOR PUBLIC ADRESS HORN	
OFNR OTD	OPTICAL FIBER NON-CONDUCTIVE RISER OPTICAL TIME DOMAIN REFLECTOMETER		↓	DURESS PUSHBUTTON	
PA PDU	OUTSIDE PLANT PUBLIC ADDRESS POWER DISTRIBUTION UNIT				
POE POS	POWER OVER ETHERNET POINT OF SALE				
POTS PSTN PTP	PLAIN OLD TELEPHONE SERVICE PUBLIC SWITCHED TELEPHONE NETWORK POINT-TO-POINT				
PTZ RDP	PAN, TILT, AND ZOOM RATE DEMARCATION POINT				
REX RMU	REQUEST TO EXIT RACK MOUNTED UNIT RACK LINIT				
SCS SM	STRUCTURED CABLING SYSTEM SINGLEMODE				
SNR STP	SIGNAL-TO-NOISE RATIO SHIELDED TWISTED-PAIR				
TBB	TELECOMMUNICATIONS INDUSTRY ASSOCIATION TELECOMMUNICATIONS BONDING BACKBONE TELECOMMUNICATIONS BONDING CONDUCTOR	v			
TGB TMGB	TELECOM GROUNDING BUSBAR TELECOM MAIN GROUNDING BUSBAR				
ULUPS	UNDERWRITERS LABORATORY UNINTERRUPTIBLE POWER SUPPLY				
USB UTP	UNIVERSAL SERIAL BUS UNSHIELDED TWISTED-PAIR				
WAP WLAN	VOICE OVER INTERNET PROTOCOL WIRELESS ACCESS POINT WIRELESS LAN				
		WIRFI FSS ACC		LNTS	
((@)		PROVIDE SLEEVE TH OTHER DEVICES SUG	IROUGH EXTERIOF	R WALL AT A HEIGHT NOT GREATER THAN 14 FEET AND IN LINE WITH CAMERAS.	
		ROUTE SLEEVE WITH TRAY.	HIN 1ST FLOOR CE	ILING INTO ADJACENT LOWER CEILING TOWARDS CABLE PATHWAY/CABLE	
REQUIRE SLEEVE TO BE TRIMMED AT FACE OF MASONRY (MAXIMUM 1/4" PROTRUSION). FIRE STOP ON BOTH ENDS AND SLOPE AT 1:10 TO THE OUTSIDE TO PREVENT MOISTURE INFILTRATION.					

• WAP INSTALLATION DOES NOT REQUIRE PREDRILLED OR PRECAST ANCHOR SUPPORT.

GENERAL CONDITIONS:

- THE DRAWINGS ARE GENERALLY DIAGRAMMATIC. THE CONTRACTOR SHALL PROVIDE TELECOMMUNICATION AND SECURITY RACEWAYS TO INCLUDE SERVICE ENTRANCE RACEWAYS, HORIZONTAL LADDER TRAY, WIRE MESH CABLE TRAY, IN-WALL CONDUIT AND BACKBOXES, J-HOOKS, HANGERS, FACEPLATES, AND PULLSTRINGS IN COMPLIANCE WITH THE DIVISION 27 AND 28 SPECIFICATIONS.
- SYMBOLS FOR VARIOUS ELEMENTS AND SYSTEMS ARE SHOWN ON THE DRAWINGS. SHOULD THERE BE ANY DOUBT REGARDING THE MEANING OR INTENT OF THE SYMBOLS USED, AN INTERPRETATION SHALL BE OBTAINED FROM THE RCDD
- 3. THE SCALE OF EACH DRAWING IS RELATIVELY ACCURATE; ANY DIMENSIONS SHOWN ARE APPROXIMATE TO CENTERLINE FROM ASSUMED BUILDING PERIMETER. THE CONTRACTOR SHALL OBTAIN THE NECESSARY DIMENSIONS FOR ANY EXACT TAKEOFFS FROM THE ARCHITECT.
- 4. ONLY EXPERIENCED CRAFTSMEN KNOWLEDGEABLE IN THEIR RESPECTIVE TRADE SHALL PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
- 5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2020 EDITION OF THE NFPA STANDARD 70 (NATIONAL ELECTRICAL CODE). CONTRACTOR SHALL ALSO CONFORM TO ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
- 6. ALL TELECOMMUNICATIONS RACEWAYS SHALL BE NEW AND SHALL MEET NEMA AND ANSI STANDARDS AND SHALL BEAR THE UL LABEL. TELECOMMUNICATION CABLING CANNOT SHARE THE SAME CONDUIT OR PATHWAY AS POWER, THEREFORE ALL CONDUITS ARE TO BE SEPARATE AND ANY OTHER PATHWAYS SHALL HAVE A BARRIER BETWEEN THE CABLES.
- CONDUIT RUNS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES AT EVERY TWO 90 DEGREE BENDS. A THIRD BEND IS ACCEPTABLE WHERE ENTIRE RUNS ARE LESS THAT 33 FEET, CONDUITS SIZE IS INCREASED, OR THE THIRD BEND IS LOCATED WITHIN 12" OF THE FEED END.
- 8. CONTRACTOR SHALL PROVIDE AND INSTALL ADEQUATE SUPPORTS NECESSARY FOR THE RACEWAY SYSTEM. THIS INCLUDES BUT IS NOT LIMITED TO BLOCKING FOR WALL MOUNTED TELEVISIONS. CONTRACTOR SHALL REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SIZES AND QUANTITIES OF ALL SUPPORTING MEANS.
- 9. PENETRATIONS OF WALLS, FLOORS, ROOFS, AND STRUCTURAL BEAMS FOR THE PASSAGE OF ELECTRICAL RACEWAYS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF WORK. ALL SUCH PENETRATIONS SHALL BE PROPERLY SEALED OFF AFTER INSTALLATION OF RACEWAY SO AS TO MAINTAIN THE STRUCTURAL, WATER PROOF, AND FIRE PROOF INTEGRITY OF THE SYSTEM PENETRATED.
- 10. PROVIDE AND INSTALL PATHWAYS IN A MANNER THAT WILL NOT DAMAGE THE CABLING FROM PHYSICAL DAMAGE. INSTALL CONDUITS WITH LONG RADIUS BENDS WITH NYLON BUSHINGS AND PROPER BONDING.

GENERAL NOTES:

- PRIOR TO INSTALLATION OF SUBSURFACE RACEWAYS IDENTIFY AND MARK ANY EXISTING UTILITIES TO AVOID DAMAGE. UNDERGROUND TELECOMMUNICATIONS RACEWAYS SHOULD MAINTAIN A MINIMUM OF 6" FROM OTHER UTILIZES SUCH AS ELECTRIC.
- 2. PROVIDE AND INSTALL WALL MOUNTED 3/4" TYPE AC FIRE RATED PLYWOOD IN EACH MDF/IDF INDICATED IN TELECOMMUNICATIONS ENLARGED PLANS. FIRE RATED STAMP SHALL BE VISIBLE FOR INSPECTION. FIRE PAINTED PLYWOOD IS NOT ALLOWED PER 2018 IBC.
- 3. ALL HORIZONTAL PATHWAYS THAT PENETRATE FIRE-RATED BARRIERS SHALL BE FIRESTOPPED IN ACCORDANCE WITH APPLICABLE CODES. 4. PROVIDE AND INSTALL CABLE TRAY WITH A MINIMUM OF 12" CLEARANCE ABOVE

AND ON ONE SIDE OF THE TRAY FOR ACCESS.

- 5. PROVIDE AND INSTALL CONDUIT FOR CABLING DISTRIBUTION SPANNING ALL HARD CEILING GREATER THAN 5' IN LENGTH AND SOFFITS TO ACCESSIBLE CEILING (WHERE NECESSARY). ALL TELECOMMUNICATIONS CONDUITS SHALL BE INSTALLED WITH NYLON PULLSTRING.
- 6. AT ALL IN-WALL DATA/AV DROPS LOCATIONS PROVIDE AND INSTALL BACKBOX AND ROUTE 1-1/4" CONDUIT FROM EACH WALL DATA OUTLET TO ABOVE ACCESSIBLE CEILING UNLESS OTHERWISE NOTED. STUB OUT CONDUIT A MINIMUM OF 6" AND PROVIDE AND INSTALL NYLON BUSHINGS AT ALL CONDUIT STUBOUTS ABOVE THE CEILING.
- PROVIDE AND INSTALL J-HOOKS FROM EACH ABOVE CEILING STUBOUT TO CABLE TRAY. J-HOOKS SHALL BE SPACED AT A MAXIMUM OF 4'. INSTALL J-HOOKS AT A MINIMUM OF 15" ABOVE CEILING CHANNEL T-BARS. HOOKS SHALL BE INDEPENDENTLY SUPPORTED.
- 8. ALL PATHWAYS INSTALLED FOR COMMUNICATIONS SHALL BE BONDED TO THE NEAREST TELECOMMUNICATIONS BUSBAR. BUSBARS SHALL BE PREDRILLED WITH STANDARDS NEMA BOLT HOLE SIZING AND SPACING FOR THE BONDING CONDUCTOR CONNECTIONS.
- 9. PROVIDE PROPER TELECOMMUNICATIONS BONDING AND GROUNDING TO ALL TELECOMMUNICATION ELEMENTS PER TIA-607-C.
- 10. CATEGORY 6 & 6A UTP HORIZONTAL CABLING MUST NOT EXCEED 295' IN LENGTH. ALL CABLING SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED. 11. FIBER OPTIC BACKBONE CABLING SHALL BE INSTALLED IN J-HOOK OR WITHIN
- THE CABLE TRAY RUN.
- 12. CABLE MUST NOT BE FASTENED TO ELECTRICAL CONDUITS, MECHANICAL, DUCTWORK/PIPING, SPRINKLER PIPES, OR ROUTED TO OBSTRUCT ACCESS TO HATCHES, DOORS, UTILITY ACCESS PANELS, OR SERVICE WORK AREAS. CABLES SHALL NOT BE ROUTED THROUGH FIRE RATED DOORS, VENTILATION SHAFTS, GRATES, OR PARALLEL WITH LINE VOLTAGE ELECTRICAL CONDUCTORS. CABLES SHALL NOT BE RUN LOOSE ON CEILING GRID OR ON CEILING TILES.
- 13. CABLES ARE TO BE RUN IN BUNDLES OF 24 MAXIMUM IN CABLE TRAY OR HOOKS ABOVE CEILINGS. CABLING SHALL BE LOOSELY BUNDLED WITH CABLE VELCRO HOOK TIES SPACED AT 24" CENTERS. CABLE TIES SHALL NOT BE USED AND SHALL NOTE BE USED TO SUPPORT CABLES.
- 14. EACH CABLE RUN SHALL INCLUDE A FIVE-FOOT SERVICE LOOP WITH BELCRO HOOK TIES LOCATED ABOVE MDF/IDF RACK(S) AND A THREE-FOOT SERVICE LOOP AT THE INFORMATION OUTLET.
- 15. NO CABLES SPLICES ARE ALLOWED.

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TRUE NORTH

- DATA KEYED NOTES:
- PROVIDE (3) DATA DROPS AT POLE MOUNTED AT 3FT, 10FT, AND 15FT ABOVE GRADE. TYPICAL ALL POLES WITH (3)
- PROVIDE 12"X12" BOX IN GROUND FOR ROUTING CABLES FOR WAPS, OWNER INSTALLED EQUIPMENT, AND
- SENSORS.TYPICAL. PROVIDE 1"C DIRECT BURY BETWEEN BOX AND POLE FOR CAT6A. TYPICAL.

DROPS .

- PROVIDE NEMA 3R BOX.
- PROVIDE 24"X24" BOX FOR IT CABINET MOUNTED ON CONCRETE PAD. PROVIDE 24 PORT POE INDUSTRIAL SWITCH IN CABINET ON GRADE.
- PROVIDE (1) 4"C BETWEEN BOXES FOR CAT6A VIA DIRECT BURY. ADD ALT #2: PROVIDE (1) 6"C IN LIEU OF (1) 4"C.
- PROVIDE 4"C BETWEEN BOX AND DISCOVERY PARK FOR CORNING FIBER IN UNDERGROUND VIA DIRECT BURY. COORDINATE ROUTING WITH EXISTING UTILITY LINES. TOP OF CONDUIT TO BE MINIMUM OF 24" BELOW GRADE. PROVIDE NYLON OR POLYPROPYLENE PULL STRING MANUFACTURERED BY GREENLEE OR EQUAL WITH MIN 240LB TENSILE STRENGTH, ROT AND MILDEW RESISTANT. ADD ALT #2: PROVIDE (1) 6"C IN LIEU OF (1) 4"C.
- PROVIDE 2"C BETWEEN BOXES. TYPICAL.
- PROVIDE (2) DATA DROPS AT POLE MOUNTED AT 3FT AND 10FT ABOVE GRADE. TYPICAL.
- 0. PROVIDE CONDUIT BETWEEN EXTERIOR TRANSITION IN ROOM H146 AND EXISTING CABLE TRAY.
- ROUTE IN FIBER JACKET IN CABLE TRAY TO IDF ROOM H101.
- ^{12.} ROUTE CONDUIT TO PLENUM HEIGHT ON EXTERIOR WALL.
- 13. ADD ALT #1: PROVIDE (2) DATA DROPS AT POLE MOUNTED AT 10FT, 15FT ABOVE GRADE. TYPICAL ALL POLES WITH (2) DROPS.

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01 WIRELESS ACCESS PLAN SCALE: 1" = 30' - 0"

 \bigvee

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