CITY OF WEST DES MOINES
PLAN AND ZONING COMMISSION COMMUNICATION

Meeting Date: February 29, 2016

Item: Alluvion DSM07, 550 SE White Crane Road - Approval of site plan for Phase 4 data center construction – Microsoft Corp - SP-002987-2016

Requested Action: Approval of Site Plan

Case Advisor: Lynne Twedt

Applicant's Request: The applicant, Microsoft Corporation, is requesting approval of a Site Plan for Alluvion DSM07 which is Phase 4 of the Microsoft project. This phase will add four more data server buildings (approximately 285,000sf) to the site. This is the last of the anticipated construction phases.

History: The subject site was annexed into the City as part of the Iowa 5 Annexation which was approved by the City Council in June, 2002. Microsoft received approval of the Phase One Site Plan that allowed the installation of an Administration building, four data server buildings and related site improvements on September 3, 2014. On May 4, 2015, the City Council approved a phasing plan for the installation of required landscaping coinciding with the building construction phases. On July 13, 2015, the City Council approved the site plan for Alluvion DSM06.

City Council Subcommittee: This item was presented to the Development and Planning City Council Subcommittee on February 22, 2016, as an informational item only. No discussion was had and no disagreement with the proposal was expressed.

Staff Review and Comment: This request was distributed to other City departments and other agencies for their review and comment. There are no outstanding issues.

Comprehensive Plan Consistency: The project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan and the land use map of the Comprehensive Plan.

Findings: This proposed project was distributed to various city departments for review and comment. Based upon that review, the following findings have been made on the proposed project:

1. The proposed development and use is consistent with the West Des Moines Comprehensive Plan in that the project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan.

2. The proposed development and use does assure compatibility of property uses within the zone and general area in that this project was reviewed by various City Departments for compliance with the Zoning Ordinance.

3. All applicable standards and conditions have been imposed which protects the public health, safety and welfare in that this project was reviewed by various City Departments and public agencies for compliance with the various state and local regulations. Based upon that review a finding is made that the project has been adequately conditioned to protect the health, welfare and safety of the community.

4. There is adequate on-site and off-site public infrastructure to support the proposed development in that this project was reviewed by various public agencies and City Departments and public utilities to ensure that either the petitioner will construct or the project has been conditioned to construct adequate public infrastructure to serve the development.

5. The proposed development and use has met the requirements contained in the City Code in that this project was reviewed by various City Departments and the project has complied with or has been conditioned to comply with all City Code requirements.

6. The proposed development and use is in keeping with the scale and nature of the surrounding neighborhood in that the proposed project is consistent with the zoning designation and Comprehensive Plan which designates this site as suitable for development such as that proposed by this project.

Staff Recommendation And Conditions Of Approval: Based upon the preceding review and a finding of consistency with the goals and policies of the Comprehensive Plan, staff recommends the Plan and Zoning Commission adopt a resolution recommending the City Council approve the Alluvion DSM07 Site Plan to allow construction of four data server buildings within the phase four area, subject to the applicant meeting all City Code requirements and the following:

1. The applicant acknowledging that all phases collectively will need to abide at all times by the regulations stated in the City's Noise Ordinance;

2. The applicant taking the necessary measures within the limits of what Microsoft security measures will allow to minimize light pollution on surrounding properties and the area in general;

3. The applicant installing site landscaping identified for this phase in conjunction with construction of this phase, with said landscaping installed prior to issuance of a final occupancy permit; and,

4. The applicant acknowledging and agreeing that any intended modifications to the site which differ from that shown on the final approval stamped site plan drawing packet shall require the review and approval of the City prior to implementation. Said changes may require the submittal and approval of a Minor or Major Modification Permit application, whichever is deemed applicable by staff which shall be reviewed and approved prior to implementation of any changes.

Property Owner/Applicant:

Microsoft Corporation
Attn: Dan McDermit
One Microsoft Way
Redmond, WA 98052
damcderm@microsoft.com

Applicant's Representatives:

PACLAND
11711 SE 8th Street, Suite 303
Bellevue, WA 98005
Attn: Steve Pesce
spesce@pacland.com

ATTACHMENTS:

Exhibit I- Plan and Zoning Commission Resolution
Exhibit A - Conditions of Approval
Exhibit II - Location Map
Exhibit III - Site Plan -- *The current site plan includes over 100 pages. Staff has provided the key sheets to illustrate phase four improvements. If specific details are desired, staff can provide upon request.*
Exhibit IV - Aerial illustration of site

EXHIBIT I

RESOLUTION NO. PZC

A RESOLUTION OF THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES, RECOMMENDING TO THE CITY COUNCIL THAT IT APPROVE A SITE PLAN TO ALLOW CONSTRUCTION OF DATA SERVER BUILDINGS

WHEREAS, pursuant to the provisions of Title 9, Chapter 1 et seq, of the West Des Moines Municipal Code, the applicant, Microsoft Corporation, has requested approval for the Alluvion DSM07 Site Plan (SP-002987-2016) located at 550 SE White Crane Road to allow construction of four data server buildings (approximately 285,000sf) and associated site improvements as part of the Alluvion DSM07 project;

WHEREAS, studies and investigations were made, and staff reports and recommendations were submitted which is made a part of this record and herein incorporated by reference;

WHEREAS, on February 29, 2016 this Commission held a duly-noticed public meeting to consider the application for Site Plan (SP-002987-2016);

NOW, THEREFORE, THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES DOES RESOLVE AS FOLLOWS:

SECTION 1. The findings, for approval, in the staff report, dated February 29, 2016, or as amended orally at the Plan and Zoning Commission meeting of February 29, 2016, are adopted.

SECTION 2. SITE PLAN (SP-002987-2016) for the construction of four data server buildings is recommended to the City Council for approval, subject to compliance with all the conditions in the staff report, dated February 29, 2016, including conditions added at the Hearing, and attached hereto as Exhibit "A". Violation of any such conditions shall be grounds for revocation of the permit, as well as any other remedy which is available to the City.

PASSED AND ADOPTED on February 29, 2016.

_____
Craig Erickson, Chairperson
Plan and Zoning Commission

ATTEST:

_____
Recording Secretary

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the Plan and Zoning Commission of the City of West Des Moines, Iowa, at a regular meeting held on February 29, 2016, by the following vote:

AYES:
NAYS:
ABSTENTIONS:
ABSENT:

ATTEST:

_____
Recording Secretary

CONDITIONS OF APPROVAL

1. The applicant acknowledging that all phases collectively will need to abide at all times by the regulations stated in the City's Noise Ordinance;

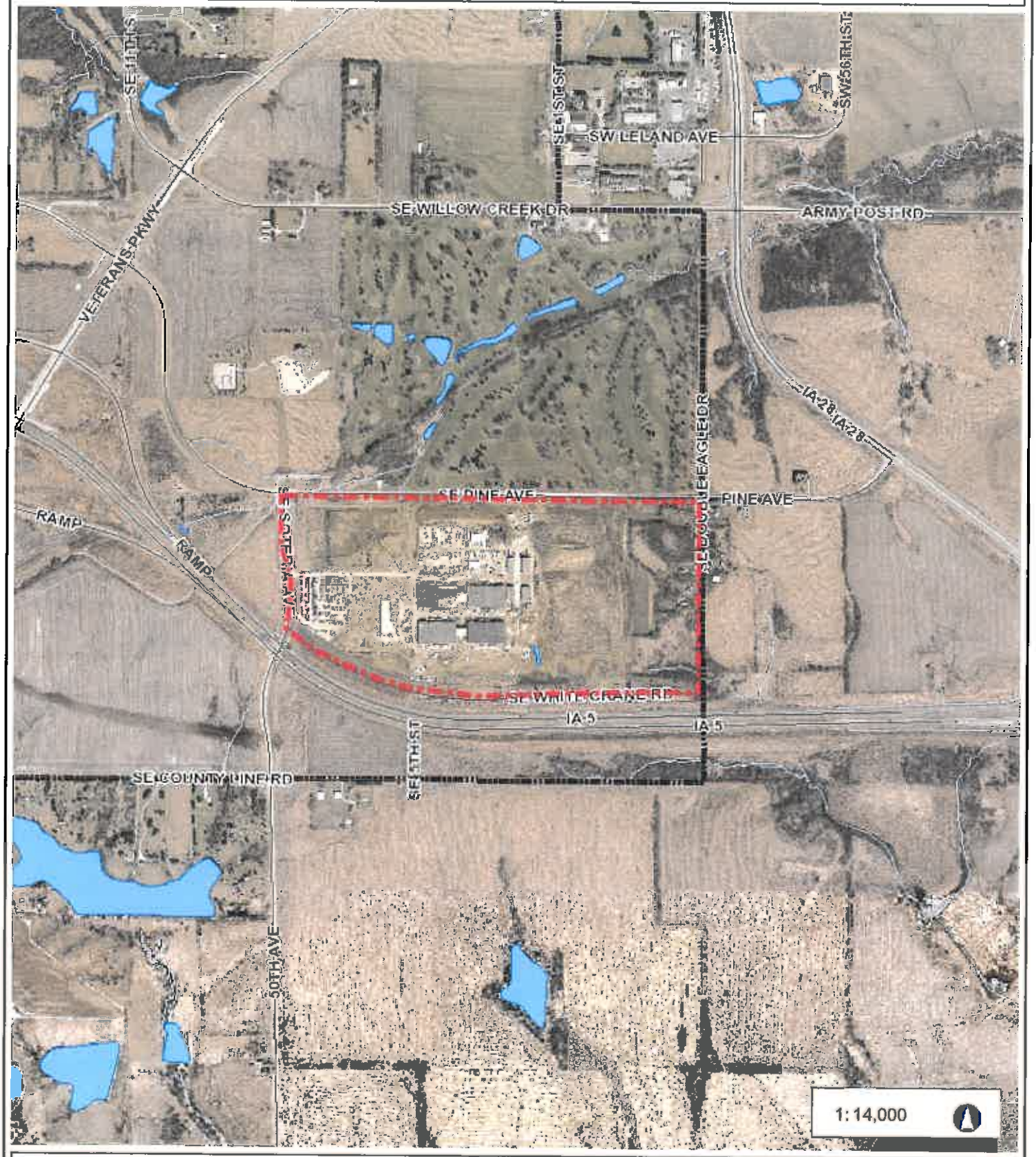
2. The applicant taking the necessary measures within the limits of what Microsoft security measures will allow to minimize light pollution on surrounding properties and the area in general;

3. The applicant installing site landscaping identified for this phase in conjunction with construction of this phase, with said landscaping installed prior to issuance of a final occupancy permit; and,

4. The applicant acknowledging and agreeing that any intended modifications to the site which differ from that shown on the final approval stamped site plan drawing packet shall require the review and approval of the City prior to implementation. Said changes may require the submittal and approval of a Minor or Major Modification Permit application, whichever is deemed applicable by staff which shall be reviewed and approved prior to implementation of any changes.

EXHIBIT II

My Map



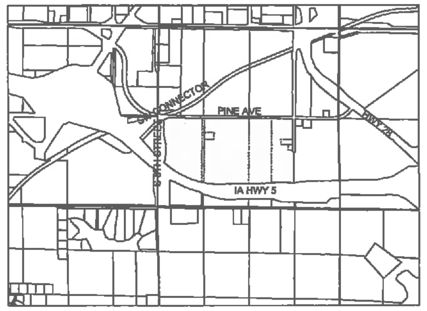
2,333.3 0 1,166.67 2,333.3 Feet

NAD_1983_StatePlane_Iowa_South_FIPS_1402_Feet

Disclaimer: The City of West Des Moines makes no warranties regarding the accuracy or completeness of the data provided herein.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

EXHIBIT III



VICINITY MAP
SCALE 1" = 2000'

Microsoft

DSM08 DATA CENTER
550 WHITE CRANE ROAD
WEST DES MOINES, IOWA 50265

CONSULTANTS

CIVIL:

PACLAND
11400 SE 8TH STREET, SUITE 345
BELLEVUE, WASHINGTON 98004
(425) 453-9501
CONTACT: TOM DARGAN
STEVEN PESCE

SURVEYOR:

CIVIL DESIGN ADVANTAGE, LLC
3405 SE CROSSROADS DR., SUITE G
GRIMES, IA 50111
(515) 369-4400
CONTACT: DEAN ROGHAIR
MIKE BROONER, P.L.S.

ARCHITECT:

PAGE, LLP
400 WEST CESAR CHAVEZ, SUITE 500
AUSTIN, TX 78701
(512) 472-6721
CONTACT: JASON GILBERT, AIA

OWNER/APPLICANT

MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052
OFFICE:(425) 703-4609
CELL: (425) 505-8321
CONTACT: DANIEL McDERMIT

GOVERNING AGENCIES

REVIEW AGENCY:

CITY OF WEST DES MOINES
4200 MILLS CIVIC PARKWAY, SUITE 2D
WEST DES MOINES, IA 50265
(515) 222-3620
CONTACT: LYNNE TWEDT

FIRE DISTRICT:

CITY OF WEST DES MOINES
3421 ASHWORTH ROAD
WEST DES MOINES, IA 50265
(515) 222-3420
CONTACT: MIKE WHITSELL

UTILITIES

WATER:

WEST DES MOINES WATER WORKS
4200 MILLS CIVIC PARKWAY, SUITE 1D
WEST DES MOINES, IA 50265-2049
(515) 222-3510
CONTACT: DIANA WILSON, P.E.

SANITARY SEWER:

CITY OF WEST DES MOINES
560 SOUTH 16TH STREET
WEST DES MOINES, IA 50265
(515) 222-3480
CONTACT: CLINT CARPENTER

BENCHMARK

BENCH MARK WDM-BM-101

CITY OF WEST DES MOINES 1-1/2" SURVEY CAP IN CONCRETE CYLINDER 1,584 +/- FEET WEST OF INTERSECTION OF SOUTH 11TH STREET AND ARMY POST ROAD, 54.5 FEET NORTH OF THE CENTERLINE OF ARMY POST ROAD. (SEE CITY TIE)

ELEVATION = 172.02

BENCH MARK WDM-BM-110

CITY OF WEST DES MOINES 1-1/2" SURVEY CAP IN CONCRETE CYLINDER AT THE NORTHEAST CORNER OF S ORILLA ROAD AND SOUTH COUNTY LINE ROAD (SEE CITY TIE)

NORTHING = 551027.64 EASTING = 1576943.14

ELEVATION = 195.97

TO CONVERT FROM WEST DES MOINES DATUM TO NAVD88 DATUM ADD 774.01 FEET.

LEGAL DESCRIPTION

A PART OF THE SOUTHEAST QUARTER AND PART OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 78 NORTH, RANGE 25 WEST OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF WEST DES MOINES. POLK COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHEAST CORNER OF THE WEST HALF OF SAID SOUTHEAST QUARTER; THENCE SOUTH 0°44'05"EAST ALONG THE EAST LINE OF SAID WEST HALF OF THE SOUTHEAST QUARTER, 1899.11 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF IOWA HIGHWAY 5; THENCE NORTH 88°39'30"WEST ALONG SAID NORTHERLY RIGHT OF WAY LINE, 406.92 FEET; THENCE SOUTH 87°11'50"WEST CONTINUING ALONG SAID NORTHERLY RIGHT OF WAY LINE, 260.47 FEET; THENCE SOUTH 87°54'07"WEST CONTINUING ALONG SAID NORTHERLY RIGHT OF WAY LINE, 1555.25 FEET; THENCE NORTHWESTERLY CONTINUING ALONG SAID NORTHERLY RIGHT OF WAY LINE AND ALONG CURVE CONCAVE NORTHEASTERLY WHOSE RADIUS IS 2473.75 FEET, WHOSE ARC LENGTH IS 1659.46 FEET AND WHOSE CHORD BEARS NORTH 68°54'28" WEST, 1628.52 FEET; THENCE NORTH 50°29'16"WEST CONTINUING ALONG SAID NORTHERLY RIGHT OF WAY LINE, 65.47 FEET TO THE EASTERLY RIGHT OF WAY LINE OF SOUTH 8TH STREET; THENCE NORTHERLY ALONG SAID EASTERLY RIGHT OF WAY LINE AND A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 1077.10 FEET, WHOSE ARC LENGTH IS 610.05 FEET AND WHOSE CHORD BEARS NORTH 3°27'49" EAST, 601.93 FEET; THENCE CONTINUING NORTHERLY ALONG SAID EASTERLY RIGHT OF WAY LINE AND A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 1908.46 FEET, WHOSE ARC LENGTH IS 425.16 FEET AND WHOSE CHORD BEARS NORTH 06°22'48" WEST, 424.28 FEET; THENCE NORTH 00°00'08"EAST CONTINUING ALONG SAID EASTERLY RIGHT OF WAY LINE, 235.47 FEET; THENCE NORTH 78°11'00"EAST CONTINUING ALONG SAID EASTERLY RIGHT OF WAY LINE, 65.91 FEET; THENCE NORTH 55°49'46"EAST CONTINUING ALONG SAID EASTERLY RIGHT OF WAY LINE, 79.45 FEET TO A POINT BEING 33.00 FEET SOUTH OF THE NORTH LINE OF SAID SOUTHWEST QUARTER; THENCE NORTH 89°43'16"WEST PARALLEL WITH SAID NORTH LINE OF THE SOUTHWEST QUARTER, 309.62 FEET TO THE WEST LINE OF SAID SOUTHWEST QUARTER; THENCE NORTH 00°10'06" WEST ALONG SAID WEST LINE, 33.00 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 35; THENCE SOUTH 89°43'16"EAST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER, 2641.54 FEET TO THE CENTER OF SAID SECTION 35; THENCE SOUTH 89°43'28"EAST ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER, 1315.47 FEET TO THE POINT OF BEGINNING AND CONTAINING 160.70 ACRES (7,000,160 SQUARE FEET).

NOTES

1. SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS AND THE CURRENT CITY OF WEST DES MOINES STANDARD SPECIFICATIONS FOR SUBDIVISIONS AND ADDENDUMS.
2. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS AND DSM05, DSM06, AND DSM07 DESIGN INFORMATION. THIS PLAN DOES NOT REPRESENT A DETAILED FIELD SURVEY. THE EXISTING CONDITIONS. SHOWN ON THIS PLAN SHEET ARE BASED UPON SURVEY PREPARED BY CIVIL DESIGN ADVANTAGE DATED 6/3/2014 AND DSM05. DSM06, AND DSM07 DESIGN DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS/HER OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
3. CAUTION – NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, PRIOR PHASE DESIGN INFORMATION AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

SITE AREA DATA

EXISTING :	IMPERVIOUS	2.05 ACRES (89,350 SF) (1.3%)
	PERVIOUS	158.65 ACRES (6,910,810 SF) (98.7%)
PROPOSED:	IMPERVIOUS	101.60 ACRES (4,425,696 SF) (69.4%)
	PERVIOUS	59.10 ACRES (2,574,396 SF) (30.6%)
TOTAL LAND AREA (LOT 1)		160.70 ACRES (7,000,160 SF)
DSM05 AREA		67.54 ACRES (2,294,012 SF) (42.0%)
DSM06 AREA		14.36 ACRES (625,427 SF) (8.9%)
DSM07 AREA		15.76 ACRES (686,284 SF) (9.8%)
DSM08 AREA		15.52 ACRES (676,030 SF) (9.7%)
OPEN SPACE AREA: REQUIRED		32.14 ACRES (1,400,018 SF) (20.0%)
	PROVIDED	47.52 ACRES (1,793,365 SF) (29.6%)

BUILDING DATA

DSM08.AZA & DSM08.AZB	142,285 SF
DSM08.AZC & DSM08.AZD	142,285 SF

SITE DATA

EXISTING COMPREHENSIVE PLAN		LIGHT INDUSTRIAL
PROPOSED COMPREHENSIVE PLAN		LIGHT INDUSTRIAL
EXISTING ZONING		LIGHT INDUSTRIAL
PROPOSED ZONING		LIGHT INDUSTRIAL
SURROUNDING LAND USES:		
NORTH:	EXISTING LAND USE	WILLOW CREEK GOLF COURSE
	EXISTING ZONING	OPEN SPACE
	COMPREHENSIVE PLAN DESIGNATION	OPEN SPACE
EAST:	EXISTING LAND USE	AGRICULTURAL
	EXISTING ZONING	CITY OF DSM
	COMPREHENSIVE PLAN DESIGNATION	CITY OF DSM
SOUTH:	EXISTING LAND USE	IOWA-5 FREEWAY
	EXISTING ZONING	UNZONED
	COMPREHENSIVE PLAN DESIGNATION	IOWA 5 FREEWAY
WEST	CURRENT LAND USE	NONE
	EXISTING ZONING	UNZONED
	COMPREHENSIVE PLAN DESIGNATION	NONE

SHEET INDEX

811
Know what's below.
Call before you dig.

IOWA ONE CALL AT 811 OR
1-800-292-8989
CONTRACTORS WEB TICKET ENTRY

CITY OF WEST DES MOINES
APPROVED BY: ______ DATE: ______

LICENSED PROFESSIONAL ENGINEER — PAUL JEFFREY MANZER 16695 — IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.
PAUL JEFFREY MANZER, P.E. — DATE 7.21.15
LICENSE NUMBER 16695
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2015
PAGES OR SHEETS COVERED BY THIS SEAL:
APPLIES TO CIVIL SHEETS NOTED ABOVE

Page/
Page Southerland Page, Inc.
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www.PacLand.com

Microsoft

DSM 08
DATA CENTER
550 SE WHITE CRANE ROAD
WEST DES MOINES,IA 50265

Design Team

Design: L. PALMER / J. AL-KANTANI
Drawn: J. AL-KANTANI
Checked: T. DARGAN
Date: 19 SEPTEMBER 2014
PACLAND Project No.
M.S. Project No.

Approvals

CUSTOMER — Date
MICROSOFT
PETER WANGIA
ERIC BEAL
STEVE STEINERT
ANDREW TAYLOR
ERIC YANEZ
CSA: RICK HAGE

DESIGN TEAM
JASON GILBERT/ PAGE
BRYAN HAYWOOD/ PAGE
STEVE PESCE/ PACLAND
DAVID BROWN/ PKB
CAMERON BROWN/ PAGE
JOHN CURRIE/ PAGE
ANDY BAXTER/ PAGE
NATE ELLIS/ SPARLING
PETE GRETZKE/ ASG

Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER — PAUL JEFFREY MANZER 16695 — IOWA

Key Plan

Bar Code

Sheet Title/Number

COVER SHEET

C-A-01

GENERAL NOTES (BUILDING NOMENCLATURE PLAN)

A. THIS SHEET IS INTENDED TO CONVEY THE FULL BUILD-OUT SITEWIDE STRATEGY FOR BUILDING/EQUIPMENT NAMING ONLY.
B. THIS DRAWING INCLUDES PHASE 4 CONSTRUCTION AS WELL AS PREVIOUS PHASES. PREVIOUS PHASES ARE SHOWN DIAGRAMATICALLY.
C. REFER TO THE REST OF THIS SET FOR SPECIFIC INFORMATION RELATED TO THE CONSTRUCTION OF PHASE 4.
D. THE FULL SITE BUILD OUT CONSISTS OF (1) ADMINISTRATION BUILDING. THIS BUILDING IS CONSTRUCTED IN PHASE 1.
E. THE FULL SITE BUILD OUT CONSISTS OF (4) CNR BUILDINGS, LETTERED A THROUGH D. ALL CNR BUILDINGS ARE CONSTRUCTED IN PHASE 1.
F. THE FULL SITE BUILD OUT CONSISTS OF (4) AZ SETS, NUMBERED 1 THROUGH 4. AZ SET 4 IS INCLUDED WITH PHASE 4 CONSTRUCTION.
G. EACH AZ SET CONTAINS (4) AZs, LETTERED A, B, C, OR D AND (2) AZ SUPPORT BUILDINGS, NUMBERED A OR B. SBA IS ALWAYS BETWEEN AZ's A & B. SBB IS ALWAYS BETWEEN AZs C & D. THE SUPPORT BUILDINGS IN AZ SET 4 ARE CONSTRUCTED WITH PHASE 4 CONSTRUCTION.
H. EACH AZ IS DIVIDED IN TO (4) CELLS, NUMBERED 1 THROUGH 4. EACH CELL IS DIVIDED IN TO (2) MZs. EACH MZ IS LETTERED EITHER A OR B. REFER TO THE DIAGRAM ON THIS SHEET FOR ADDITIONAL DETAIL. NOTE: THE CELL AND MZ DIVISIONS ARE FOR PURPOSES OF EQUIPMENT NAMING/TAGGING AND OPERATIONAL DESIGNATIONS ONLY. THERE ARE NO PHYSICAL SEPARATIONS BETWEEN CELLS AND/OR MZs.
I. AREAS SHOWN ON SITE AS "FUTURE UNPROGRAMMED SPACE" ARE AREAS DESIGNATED FOR POTENTIAL FUTURE USE. NO BUILDING CONSTRUCTION IS INCLUDED IN ANY OF THESE AREAS FOR PHASE 4.

NAMING NOMENCLATURE LEGEND

BUILDING GROUPINGS:
AS = AVAILABILITY SET (AKA AZ SET); (4) PER FULLY BUILT-OUT SITE, NUMBERED 1, 2, 3, OR 4

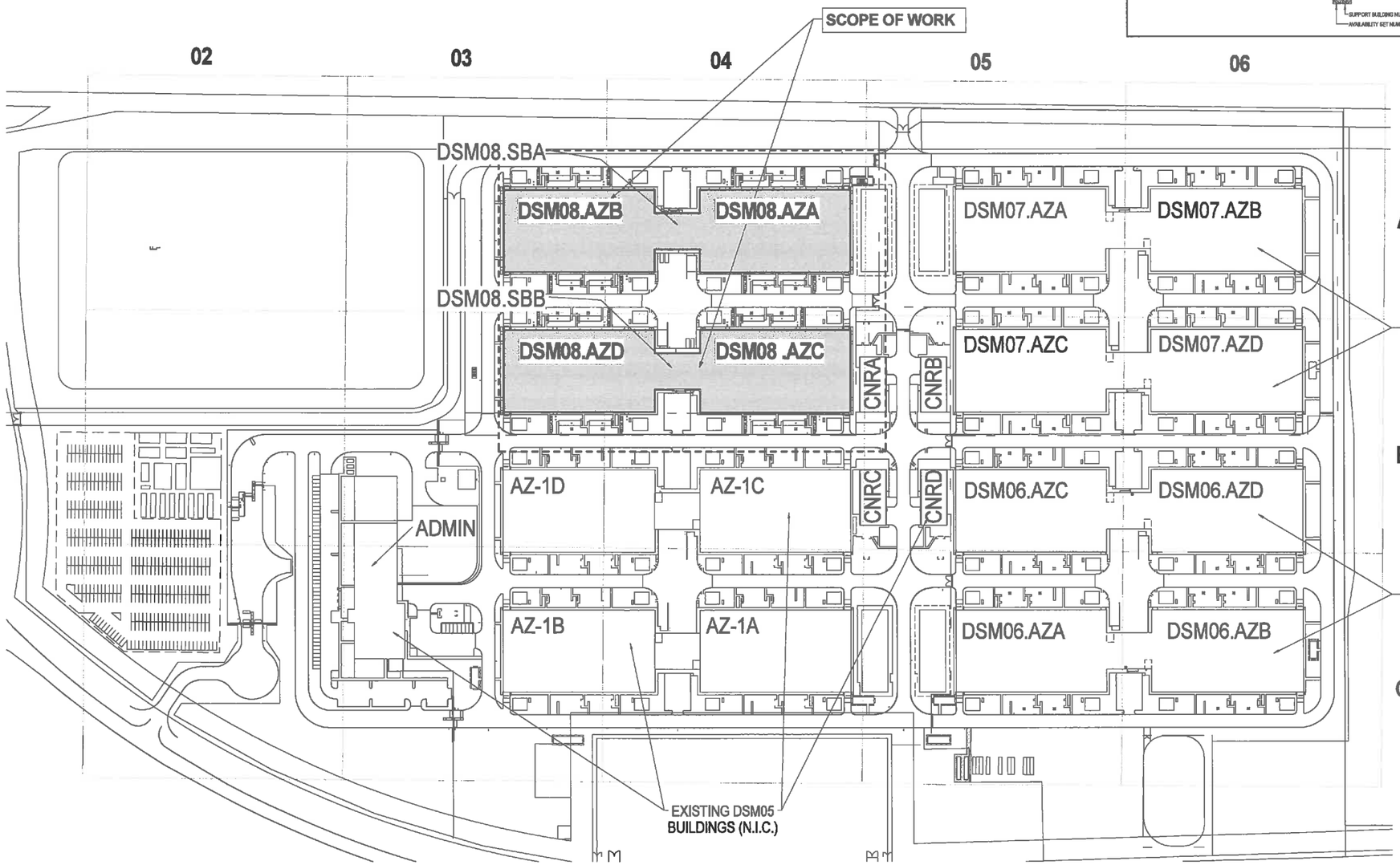
BUILDINGS:
AB = ADMINISTRATIVE BUILDING (AKA ADMIN BUILDING); 1 PER FULLY BUILT-OUT SITE
AZ = AVAILABILITY ZONE (AKA AZ BUILDING); 4 PER AVAILABILITY SET, LETTERED A, B, C OR D
CR = CORE NETWORK ROOM (AKA CNR BUILDING); 4 PER FULLY BUILT-OUT SITE, LETTERED A, B, C, OR D
SB = SUPPORT BUILDING (AKA AZ SUPPORT BUILDING); 2 PER AVAILABILITY SET, NUMBERED A OR B.
TL = TAPE LIBRARY (NOT INCLUDED IN PHASE 4 PROJECT SCOPE)
WH = WAREHOUSE (NOT INCLUDED IN PHASE 4 PROJECT SCOPE)

AREA DESIGNATIONS WITHIN BUILDINGS:
CE = CELL; 4 PER AZ, NUMBERED 1, 2, 3 OR 4
MZ = MAINTENANCE ZONE; 2 PER CELL, LETTERED A OR B

TYPICAL NAMING CONVENTION EXAMPLES

#S1AZA
- AZ LETTER (AZA, AZB, AZC OR AZD)
- AVAILABILITY SET NUMBER (AS1, AS2, AS3 OR AS4)

#S2SBA
- SUPPORT BUILDING NUMBER (SB1 OR SB2)
- AVAILABILITY SET NUMBER (AS1, AS2, AS3 OR AS4)



1 BUILDING NOMENCLATURE PLAN
SCALE: 1" = 100'-0"

NORTH

Page/

Page Southerland Page, LLP
400 W. Cesar Chavez Street Fifth Floor
Austin, TX 78701
pagetelek.com

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FAX 512 477 3211

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Microsoft

DSM08
DATA CENTER
550 SE WHITE CRANE ROAD
WEST DES MOINES, IA 50265

Design Team

Design	BNH
Drawn	BRB
Checked	JMM
Date	16 JULY 2015
Page Project No.	140033.02
M.E. Project No.	P. 12053

Approvals

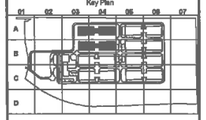
CLIENT/USER	Date
MICROSOFT	
Microsoft Mechanical Engineer	PETER VANKEA
Microsoft Cx/Ex Engineer	ERIC BEAL
Microsoft Electrical Engineer	STEVE STEINERT
Engineering Manager	ANDREW TAYLOR
Security Manager	ERIC YANEZ
CSA	RICK HIKIE
DESIGN TEAM	
CDA Design Lead	JASON GILBERT/ PAGE
Architectural Lead	BRYAN HAYWOOD/ PAGE
Civil Engineering Lead	STEVE PESCE/ PACLAND
Structural Engineering Lead	DAVID BROWN/ PKS
Electrical Engineering/ EPMS Lead	CAMERON BROWN/ PAGE
Mechanical Engineering Lead	JOHN CURRIE/ PAGE
BAS Controls Lead	ANDY BAXTER/ PAGE
Telecom Lead	NATE ELLIS/ SPARLING
Security Lead	PETE BRETZKE/ ASG

Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

Key Plan



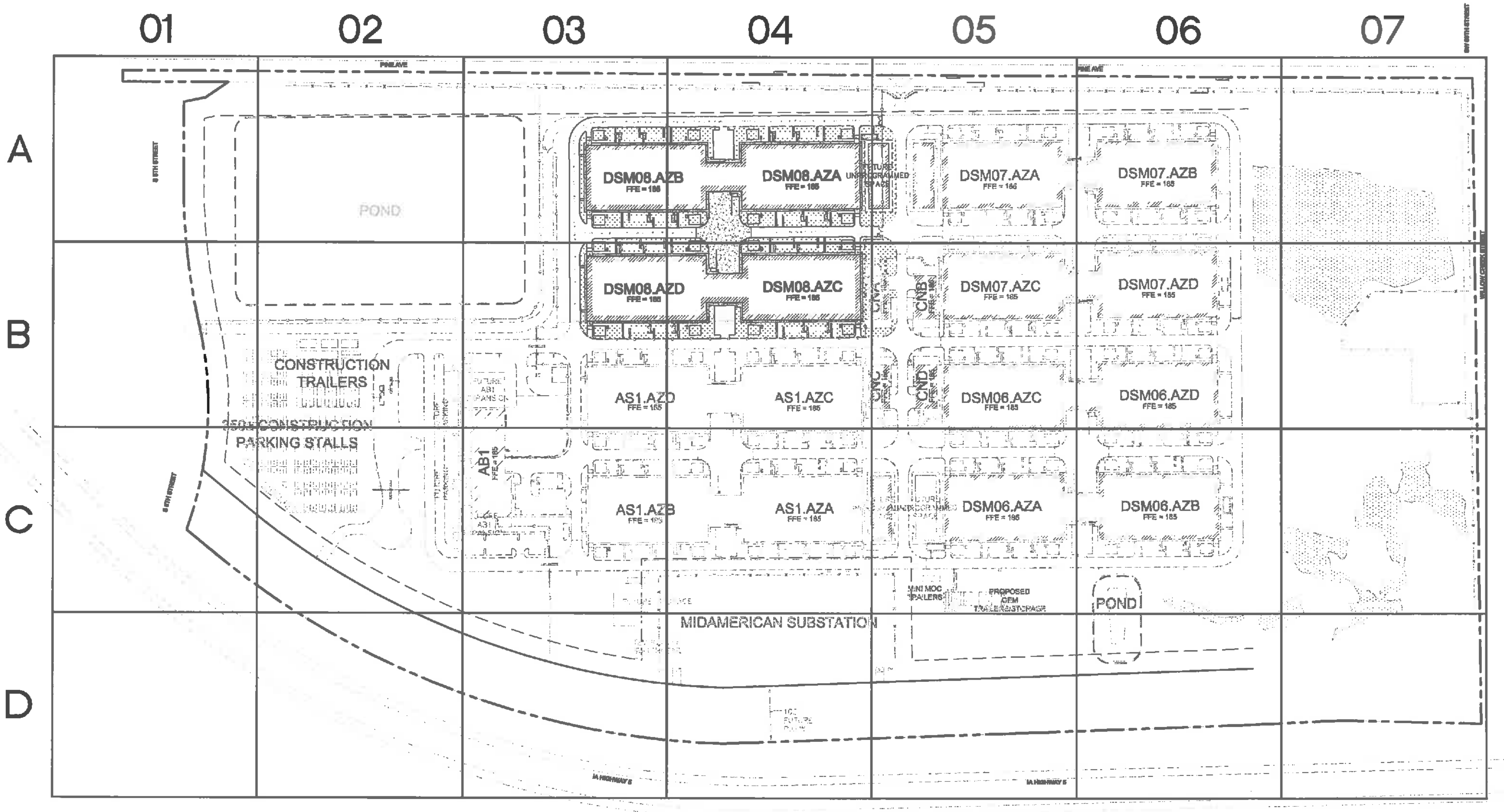
Bar Code

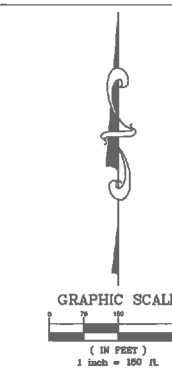
Sheet Title/Number

BUILDING NOMENCLATURE PLAN

G-A-05

G-A-05





CITY OF WEST DES MOINES NOTES

1. ALL CONNECTIONS TO PUBLIC SEWERS SHALL BE CORE DRILLED TO MANHOLES.
2. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS, AND/ OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATION FOR SUBDIVISIONS.
3. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W./ EASEMENTS AND/ OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE WDM CONSTRUCTION DIVISION 'CLINT CARPENTER' (515-222-3480) TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.

GENERAL NOTES

A. DIMENSIONS AND COORDINATES ARE TO FACE OF CURB (TYP).
B. UTILITY INSTALLATION INCLUDES TRENCHING, PIPE BEDDING AND BACKFILL. REINSTATE SURFACE TO ORIGINAL CONDITION UNLESS NOTED OTHERWISE ON SITE IMPROVEMENTS PLAN.
C. PROVIDE THRUST BLOCKS/JOINT RESTRAINTS ON ALL PRESSURIZED LINES. SEE DETAIL 4/C-F-11 FOR JOINT RESTRAINTS.
D. FIELD VERIFY LIMITS OF DEMOLITION & LOCATION OF UTILITIES TO BE REMOVED.
E. FIELD VERIFY CONNECTION POINTS TO EXISTING UTILITIES. NOTIFY ENGINEER OF DISCREPANCIES.
F. EXISTING GRADES SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
G. CONTRACTOR RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE TO STORM DRAIN SYSTEM UNTIL PERMANENT STORM DRAIN SYSTEM IS INSTALLED.
H. TELECOM, ELECTRICAL & LSS SHOWN FOR REFERENCE ONLY. FIELD VERIFY LOCATIONS PRIOR TO EXCAVATION.
I. ADJUST UTILITY STRUCTURES (PIV'S, HYDRANTS, MH'S, CB'S, VAULTS ETC) TO FINISH GRADE WHEN COMPLETING FINAL GRADING. ELECTRICAL AND TELECOM VAULTS TO BE ADJUSTED TO FINISHED GRADE WITH GRADE RINGS.
J. UNLESS OTHERWISE DIRECTED BY THE OWNER OR BY THE A/E, THE CONTRACTOR SHALL REPLACE, IN KIND, ALL BASE, AC PAVING, CONCRETE CURBS, GUTTERS AND SIDEWALKS, UTILITIES, LANDSCAPING, AND IRRIGATION LINES, NOT INTENDED FOR DEMOLITION, BUT WHICH HAVE BEEN REMOVED OR DISTURBED AS A RESULT OF DEMOLITION ACTIVITIES.
K. WHERE DEMOLITION OCCURS AND NO SPECIFIC INSTRUCTIONS ARE MADE CONCERNING NEW OR REPLACEMENT FEATURES, THE CONTRACTOR SHALL RESTORE THE AREA TO A FINISHED CONDITION USING MATERIALS MATCHING THOSE ADJACENT TO THE REMOVAL SITE, MAKING SURE PROPER DRAINAGE AND APPEARANCE IS ATTAINED.
L. COORDINATE INSTALLATION OF ELECTRICAL GROUNDING GRID AT SITE & BLDG SLABS, FENCING AND WALLS WITH ELECTRICAL DRAWINGS.
M. SEE ELECTRICAL PLANS FOR SITE LIGHTING.

NOTES (PACLAND)

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CAUTION – NOTICE TO CONTRACTOR THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES AND EXISTING IMPROVEMENTS WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS ON THE PLANS.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF OUTDOOR UTILITY YARD, EXIT PORCHES, SIDEWALKS, RAMPS & TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
4. DIMENSIONS SHOWN REFER TO FACE OF CURB, TOP OF PAVEMENT, BUILDING GRID LINES OR TO THE CENTERLINE OF PAVEMENT STRIPING, UNLESS OTHERWISE NOTED.
5. ALL PAVED PARKING LOT AREAS WITHIN THE LIMITS OF IMPROVEMENTS SHALL BE STANDARD DUTY PAVEMENT UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN FOR THE CITY ENGINEER'S APPROVAL PRIOR TO ANY WORK WITHIN THE CITY RIGHT-OF-WAY. TEMPORARY TRAFFIC CONTROL REQUIRED WITHIN THE MICROSOFT PROPERTY SHALL BE PROVIDED TO MICROSOFT DSM OPERATIONS MANAGER PRIOR TO ANY WORK.
7. REFER TO WILLOW CREEK PLAT 1 FOR LEGAL DESCRIPTION, DIMENSIONS OF PROPERTY LINES, BASIS OF BEARINGS & BENCHMARK INFORMATION.
8. ALL ON-SITE PAINTED STRIPING SHALL BE THERMOPLASTIC. (CONTRACTOR TO REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL PAVING MARKING REQUIREMENTS.)
9. PARKING LOT STRIPING SHALL BE WHITE, 4" WIDE & THERMOPLASTIC, UNLESS OTHERWISE NOTED. LIGHT POLE BASES TO BE PAINTED TRAFFIC YELLOW (DOUBLE COAT)
10. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY OR AS SHOWN ON C-B-02. ALL COST SHALL BE INCLUDED IN BASE BID.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
12. CURB RADII ADJACENT TO PARKING STALLS SHALL BE 3'. ALL OTHER CURB RADII SHALL BE 10', UNLESS OTHERWISE NOTED.
13. ALL INTERNAL DRIVES, INCLUDING THE GRAVEL DRIVE CONNECTION SHALL BE CONSTRUCTED TO ACCOMMODATE 75,000 LBS. G.V.W. ALL PAVED SURFACES SHALL BE MAINTAINED 365 DAYS A YEAR, INCLUDING THE PLOWING OF SNOW.

Know what's **below.** **Call** before you dig.

CITY OF WEST DES MOINES
APPROVED BY: ____________ DATE: ____________

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PACLAND

Microsoft

DSM 08 DATA CENTER

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Drawn	J. AL-KAHTANI
Checked	T. DARGAN
Date	[illegible]
PACLAND Project No.	[illegible]
M.E. Project No.	[illegible]

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Microsoft Electrical Engineer	STEVE STEINERT
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Telecom Lead	NATE ELLIS/ SPARLING
Security Lead	PETE BRETZKE/ ASG

Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

PAUL JEFFREY MANZER 18695 LICENSED PROFESSIONAL ENGINEER IOWA

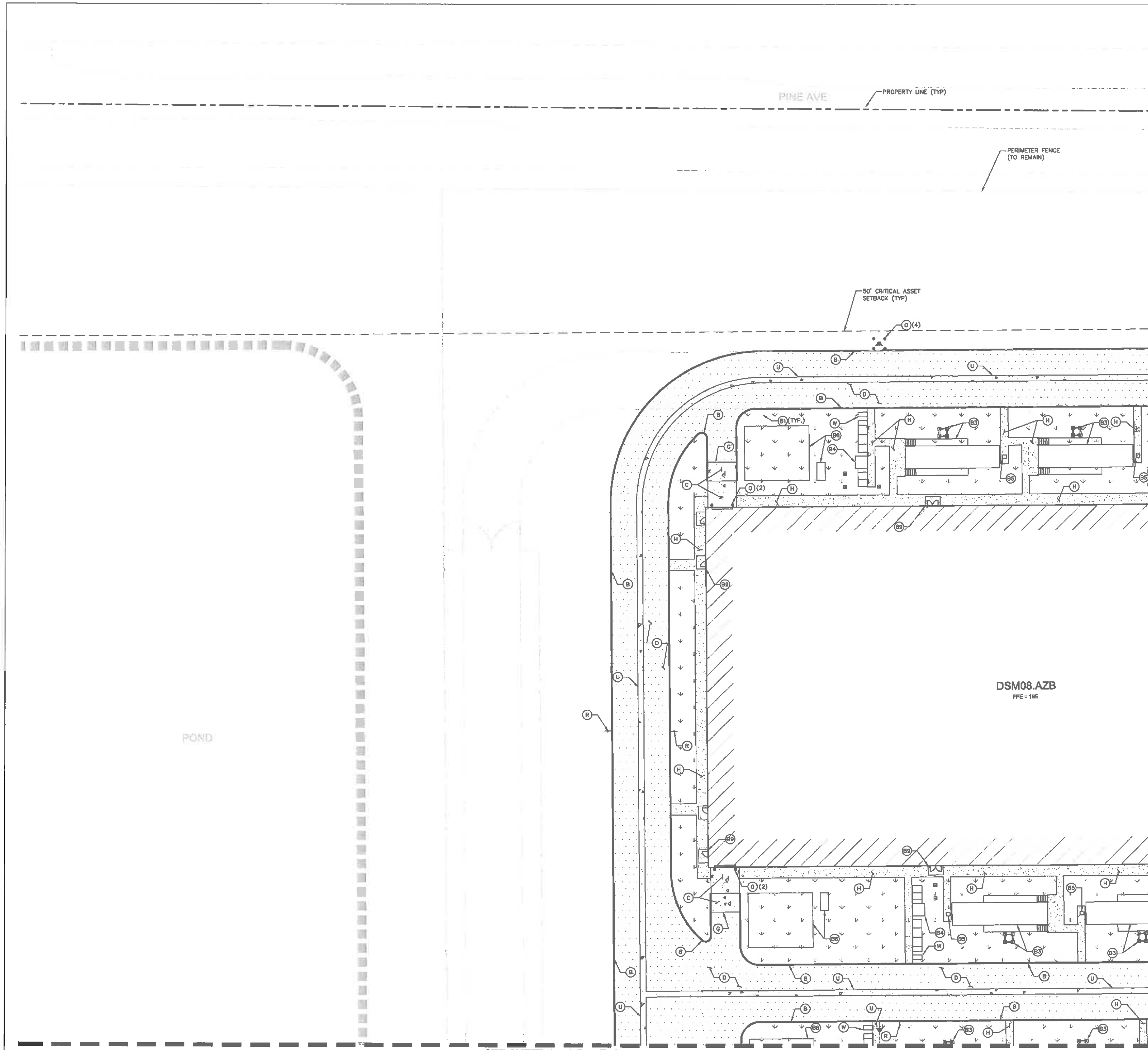
Key Plan

Bar Code

Sheet Title/Number

CIVIL
SITE IMPROVEMENTS
PLAN OVERALL

C-C1-01



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED CURB
- SECURITY FENCE
- TEMPORARY CHAINLINK FENCE
- PERMANENT CHAINLINK FENCE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- GRAVEL ROAD
- LANDSCAPING
- PIPE BOLLARD
- FIRE HYDRANT
- VEHICULAR DIRECTIONAL SIGN
- ELECTRICAL OVERHEAD FOUNDATION

SITE KEY

- (A) CONNECT TO EXISTING CONCRETE CURB, FIELD VERIFY
- (B) 6" STANDARD CONCRETE CURB (TYP) (1/C-F-02)
- (C) CONCRETE PAVEMENT (TYP) (4/C-F-02)
- (D) HEAVY-DUTY ASPHALT PAVEMENT (TYP) (2/C-F-02)
- (E) LIGHT-DUTY ASPHALT PAVEMENT (TYP) (3/C-F-02)
- (F) HEAVY TO LIGHT DUTY AC TRANSITION, SAND AND SEAL (TYP)
- (G) ASPHALT-CONCRETE PAVEMENT TRANSITION (6/C-F-02)
- (H) CONCRETE SIDEWALK (TYP) (5/C-F-02)
- (I) GRAVEL ROAD (TYP) (7/C-F-02)
- (J) 6" FLUSH VERTICAL CURB W/ 4" WIDE STRIPING (8/C-F-02)
- (K) ADA STALL (TYP) (12/C-F-02)
- (L) SIDEWALK RAMP (TYP) (13/C-F-02)
- (M) 4" WIDE, SOLID WHITE THERMOPLASTIC STRIPE (TYP)
- (N) 4" WIDE STRIPING AT 45°, 36" O.C. (TYP)
- (O) PIPE BOLLARD (QUANTITIES SHOWN IN PARENTHESES) (SEE ARCHITECTURAL PLANS FOR LOCATIONS) (10,11/C-F-02)
- (P) STOP BAR (TYP) (15/C-F-02)
- (Q) STOP SIGN PER MUTCD R10-6
- (R) SPEED LIMIT SIGN PER MUTCD R2-1 (16/C-F-02)
- (S) TYPE III BARRICADE (TYP) (17/C-F-02)
- (T) SAWCUT AND MATCH EDGE OF EXISTING ASPHALT PAVEMENT SAND AND SEAL (TYP)
- (U) CONCRETE RIBBON DRAIN (SEE DRAINAGE PLAN) (10/C-F-08)
- (V) JERSEY BARRIER (TYP)
- (W) ECOLOGY BLOCK 2'x2'x6' (TYP)
- (X) PLASTIBETON TELECOM TRENCH (TYP) (SEE TELECOM PLANS)
- (Y) STANDARD TO BARRIER CURB TRANSITION (9/C-F-02)

SITE FEATURES (BY OTHERS)

- (B1) SITE LIGHTING (SEE ELECTRICAL PLANS)
- (B2) CAST IN PLACE CONCRETE WALL (SEE STRUCTURAL PLANS.)
- (B3) GENERATOR (TYP) (SEE ELECTRICAL PLANS)
- (B4) ELECTRICAL EQUIPMENT (TYP) (SEE ELECTRICAL PLANS)
- (B5) FUEL PAD (TYP) (SEE STRUCTURAL PLANS)
- (B6) PUMP HOUSE/COOLING TOWER (TYP) (SEE ARCHITECTURAL/MECHANICAL PLANS)
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- (B10) KNOX BOX (TYP) (SEE STRUCTURAL PLANS)

FENCING KEY

- (F1) 6' TALL, GALVANIZED CHAIN LINK FENCE (NO BARBED WIRE.) (5/C-F-03)
- (F2) FENCE SIGNAGE. MAXIMUM SPACING 150'. CENTER ON FENCE PANELS. CONTRACTOR TO SUBMIT PROPOSED LOCATIONS TO MICROSOFT SECURITY FOR APPROVAL PRIOR TO INSTALLATION (8/C-F-03)
- (F3) 6' TALL CHAIN LINK, DOUBLE SWING GATE. 30' WIDE CLEAR OPENING. (2/C-F-03)
- (F4) 3' WIDE CHAIN LINK PEDESTRIAN GATE (3/C-F-03)
- (F5) KNOX BOX (SEE SECURITY PLANS FOR DETAIL) (7/C-F-03)
- (F6) 6' TALL TEMPORARY CHAIN LINK FENCE WITH PIER BLOCKS (9/C-F-01)

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PACLAND

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Drawn	J. AL-KAHTANI
Checked	T. BARGAN
Date	18 SEPTEMBER 2014
PACLAND Project No.	[illegible]
M.S. Project No.	P.12[illegible]

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Microsoft Electrical Engineer	STEVE STEINERT	
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CSA	RICK HAGE	

DESIGN TEAM

CSA Design Lead	JASON GILBERT/ PAGE	Date
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Revisions

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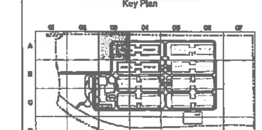
Registration

LICENSED PROFESSIONAL ENGINEER PAUL JEFFREY MANZER 18695 IOWA

Key Plan

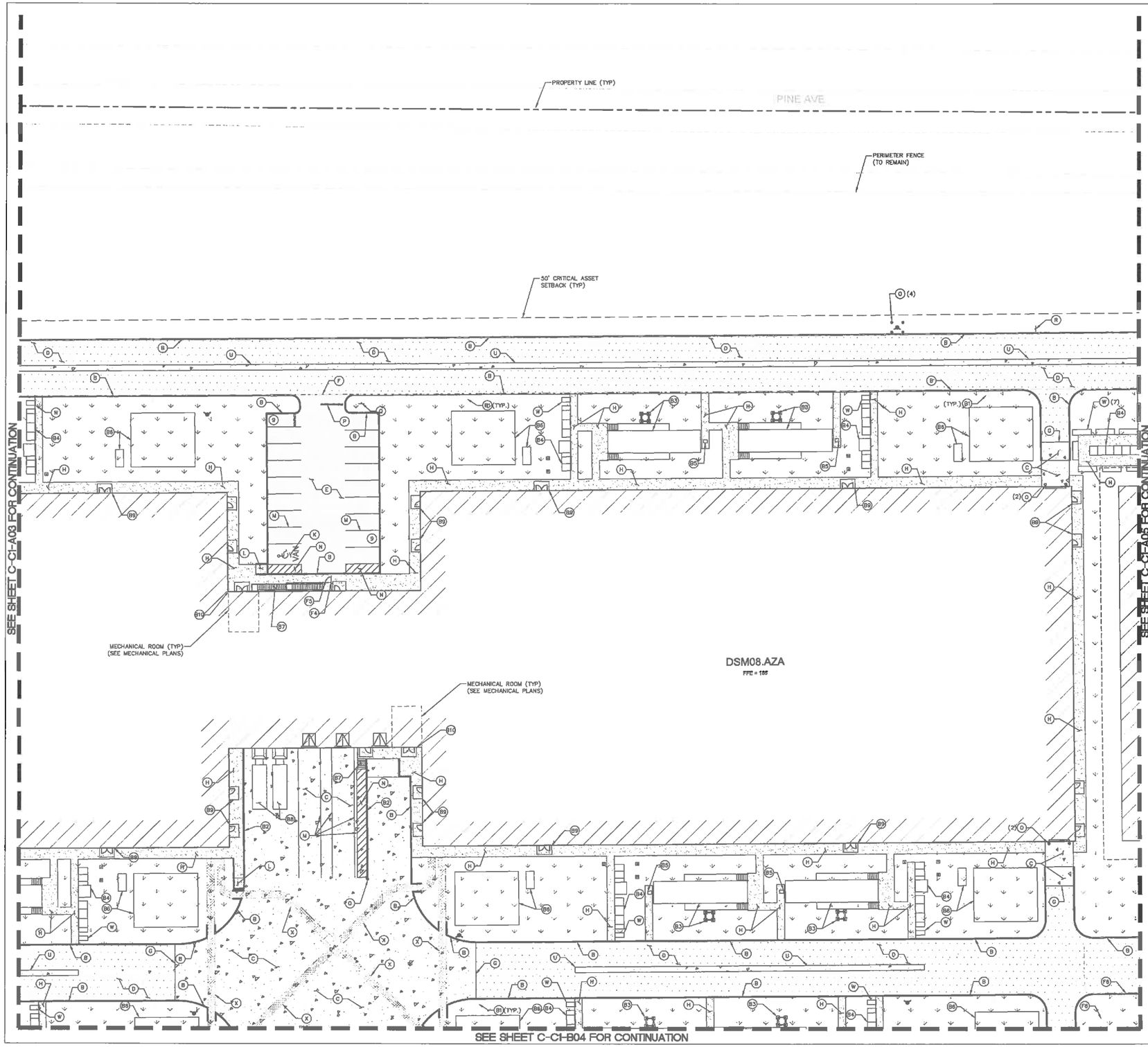


Bar Code

Sheet Title/Number

CIVIL SITE IMPROVEMENTS PLAN

C-C1-A03



GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
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- (B) 6" STANDARD CONCRETE CURB (TYP) (4/C-7-02)
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- (E) LIGHT-DUTY ASPHALT PAVEMENT (TYP) (3/C-7-02)
- (F) HEAVY TO LIGHT DUTY AC TRANSITION, SAND AND SEAL (TYP)
- (G) ASPHALT-CONCRETE PAVEMENT TRANSITION (8/C-7-02)
- (H) CONCRETE SIDEWALK (TYP) (5/C-7-02)
- (I) GRAVEL ROAD (TYP) (7/C-7-02)
- (J) 6" FLUSH VERTICAL CURB W/ 4" WIDE STRIPING (8/C-7-02)
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- (L) SIDEWALK RAMP (TYP) (13/C-7-02)
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- (N) 4" WIDE STRIPING AT 45°, 36" O.C. (TYP)
- (O) PIPE BOLLARD (QUANTITIES SHOWN IN PARENTHESES) (10,11/C-7-02) (SEE ARCHITECTURAL PLANS FOR LOCATIONS)
- (P) STOP BAR (TYP) (15/C-7-02)
- (Q) STOP SIGN PER MUTCD R10-6
- (R) SPEED LIMIT SIGN PER MUTCD R2-1 (16/C-7-02)
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- (Y) STANDARD TO BARRIER CURB TRANSITION (9/C-7-02)

SITE FEATURES (BY OTHERS)

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- (B2) CAST IN PLACE CONCRETE WALL (SEE STRUCTURAL PLANS.)
- (B3) GENERATOR (TYP) (SEE ELECTRICAL PLANS)
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- (F4) 3' WIDE CHAIN LINK PEDESTRIAN GATE (3/C-7-02)
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- (F6) 6' TALL TEMPORARY CHAIN LINK FENCE WITH PIER BLOCKS (1/C-7-02)

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PAGELAND Project No.	66007999
MLR_Project No.	P_13599

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Revisions

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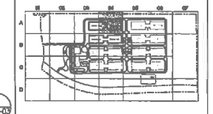
Registration

LICENSED PROFESSIONAL ENGINEER — PAUL JEFFREY MANDER 19695 — STATE OF IOWA

Key Plan



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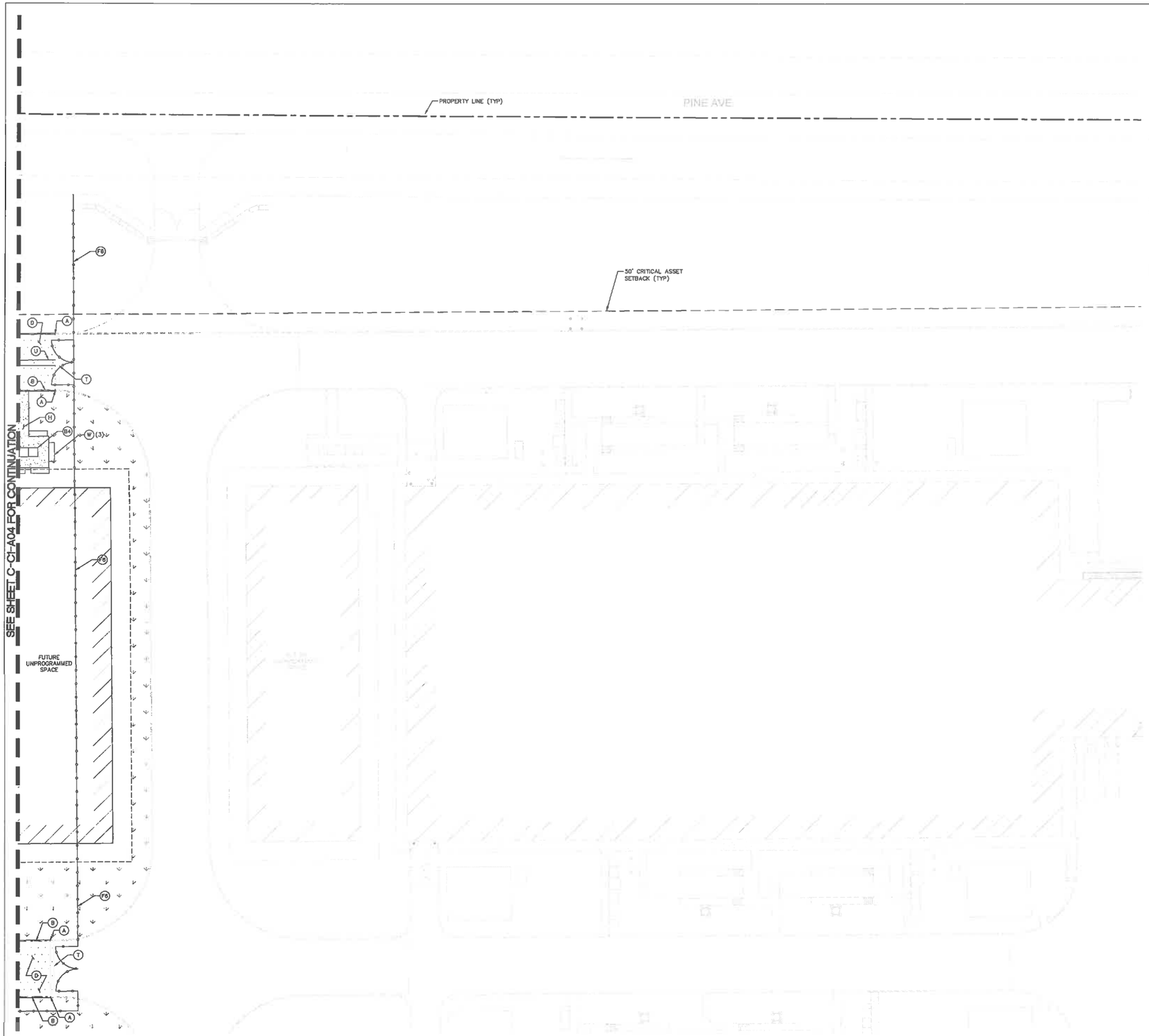
Sheet Title/Number

CIVIL SITE IMPROVEMENTS PLAN

C-C1-A04



GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED CURB
- SECURITY FENCE
- TEMPORARY CHAINLINK FENCE
- PERMANENT CHAINLINK FENCE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- GRAVEL ROAD
- LANDSCAPING
- PIPE BOLLARD
- FIRE HYDRANT
- VEHICULAR DIRECTIONAL SIGN
- ELECTRICAL OVERHEAD FOUNDATION

SITE KEY

(A) CONNECT TO EXISTING CONCRETE CURB, FIELD VERIFY
(B) 6" STANDARD CONCRETE CURB (TYP) 1/C-7-02
(C) CONCRETE PAVEMENT (TYP) 4/C-7-02
(D) HEAVY-DUTY ASPHALT PAVEMENT (TYP) 2/C-7-02
(E) LIGHT-DUTY ASPHALT PAVEMENT (TYP) 3/C-7-02
(F) HEAVY TO LIGHT DUTY AC TRANSITION, SAND AND SEAL (TYP)
(G) ASPHALT-CONCRETE PAVEMENT TRANSITION 5/C-7-02
(H) CONCRETE SIDEWALK (TYP) 6/C-7-02
(I) GRAVEL ROAD (TYP) 7/C-7-02
(J) 6" FLUSH VERTICAL CURB W/ 4" WIDE STRIPING 8/C-7-02
(K) ADA STALL (TYP) 12/C-7-02
(L) SIDEWALK RAMP (TYP) 13/C-7-02
(M) 4" WIDE, SOLID WHITE THERMOPLASTIC STRIPE (TYP)
(N) 4" WIDE STRIPING AT 45°, 36" O.C. (TYP)
(O) PIPE BOLLARD (QUANTITIES SHOWN IN PARENTHESES) 10,11/C-7-02 (SEE ARCHITECTURAL PLANS FOR LOCATIONS)
(P) STOP BAR (TYP) 15/C-7-02
(Q) STOP SIGN PER MUTCD R10-6
(R) SPEED LIMIT SIGN PER MUTCD R2-1 16/C-7-02
(S) TYPE III BARRICADE (TYP) 17/C-7-02
(T) SAWCUT AND MATCH EDGE OF EXISTING ASPHALT PAVEMENT SAND AND SEAL (TYP)
(U) CONCRETE RIBBON DRAIN (SEE DRAINAGE PLAN) 10/C-7-02
(V) JERSEY BARRIER (TYP)
(W) ECOLOGY BLOCK 2'x2'x6' (TYP)
(X) PLASTIBETON TELECOM TRENCH (TYP) (SEE TELECOM PLANS)
(Y) STANDARD TO BARRIER CURB TRANSITION 9/C-7-02

SITE FEATURES (BY OTHERS)

(S1) SITE LIGHTING (SEE ELECTRICAL PLANS)
(S2) CAST IN PLACE CONCRETE WALL (SEE STRUCTURAL PLANS.)
(S3) GENERATOR (TYP) (SEE ELECTRICAL PLANS)
(S4) ELECTRICAL EQUIPMENT (TYP) (SEE ELECTRICAL PLANS)
(S5) FUEL PAD (TYP) (SEE STRUCTURAL PLANS)
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FENCING KEY

(F1) 6' TALL, GALVANIZED CHAIN LINK FENCE (NO BARBED WIRE.) 5/C-7-02
(F2) FENCE SIGNAGE. MAXIMUM SPACING 150', CENTER ON FENCE PANELS. CONTRACTOR TO SUBMIT PROPOSED LOCATIONS TO MICROSOFT SECURITY FOR APPROVAL PRIOR TO INSTALLATION 6/C-7-02
(F3) 6' TALL CHAIN LINK, DOUBLE SWING GATE. 30' WIDE CLEAR OPENING. 7/C-7-02
(F4) 3' WIDE CHAIN LINK PEDESTRIAN GATE 3/C-7-02
(F5) KNOX BOX (SEE SECURITY PLANS FOR DETAIL) 7/C-7-02
(F6) 6' TALL TEMPORARY CHAIN LINK FENCE WITH PIER BLOCKS 9/C-7-02

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Drawn	J.ALVARADO
Checked	T.DAVISON
Date	10 SEPTEMBER 2024
PAGELAND Project No.	62437000
M.S. Project No.	P.13666

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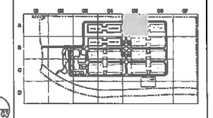
Revisions

No.	Date	Description
1	2025.07.24	100% IFC

Registration

Key Plan



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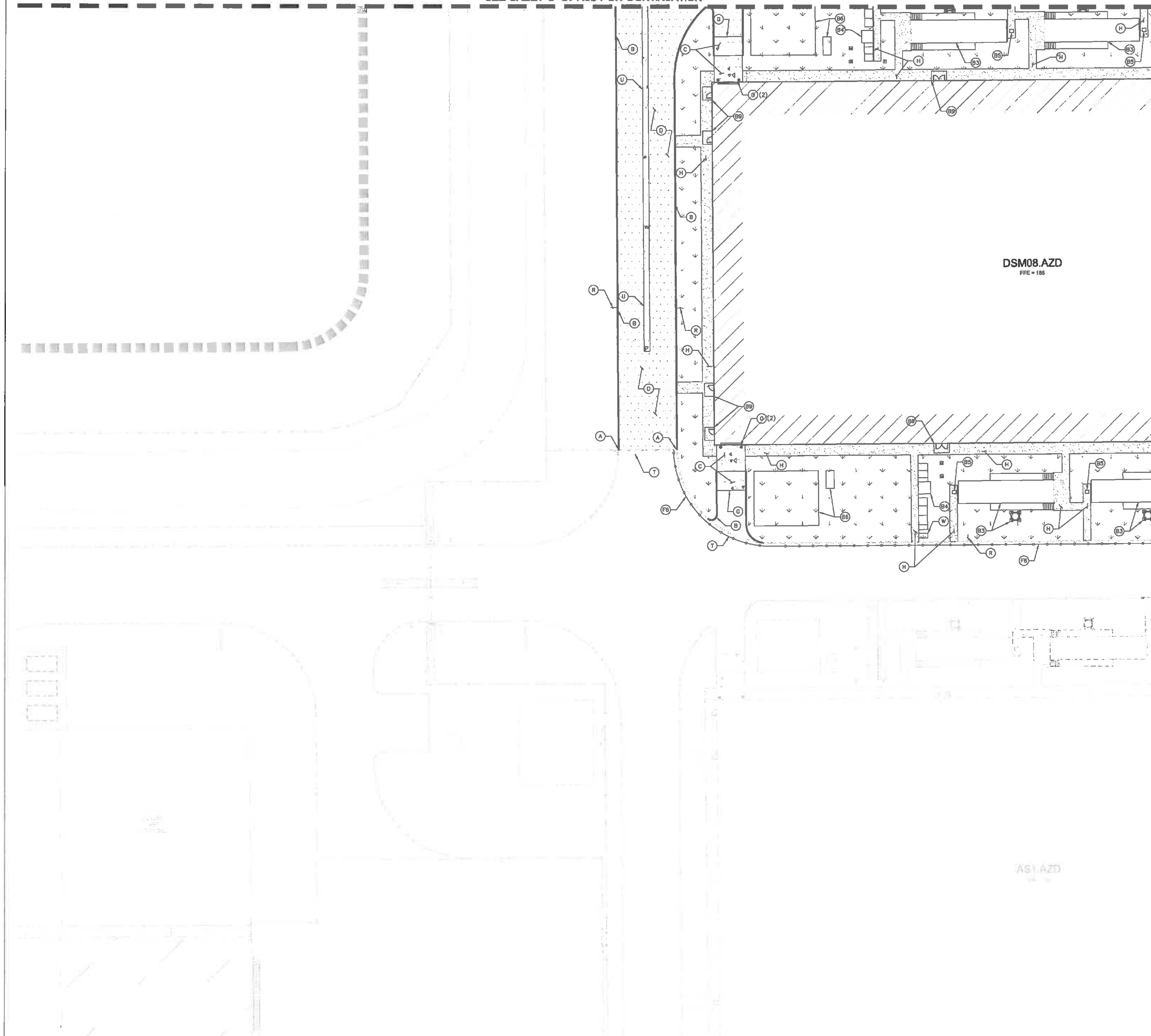
Sheet Title/Number

CIVIL SITE IMPROVEMENTS PLAN

C-C1-A05

SEE SHEET C-C1-A03 FOR CONTINUATION



SEE SHEET C-C1-B04 FOR CONTINUATION

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED CURB
- SECURITY FENCE
- TEMPORARY CHAINLINK FENCE
- PERMANENT CHAINLINK FENCE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- GRAVEL ROAD
- LANDSCAPING
- PIPE BOLLARD
- FIRE HYDRANT
- VEHICULAR DIRECTIONAL SIGN
- ELECTRICAL OVERHEAD FOUNDATION

SITE KEY

- (A) CONNECT TO EXISTING CONCRETE CURB, FIELD VERIFY
- (B) 6" STANDARD CONCRETE CURB (TYP) (1 / C-F-02)
- (C) CONCRETE PAVEMENT (TYP) (4 / C-F-02)
- (D) HEAVY-DUTY ASPHALT PAVEMENT (TYP) (2 / C-F-02)
- (E) LIGHT-DUTY ASPHALT PAVEMENT (TYP) (3 / C-F-02)
- (F) HEAVY TO LIGHT DUTY AC TRANSITION, SAND AND SEAL (TYP)
- (G) ASPHALT-CONCRETE PAVEMENT TRANSITION (6 / C-F-02)
- (H) CONCRETE SIDEWALK (TYP) (5 / C-F-02)
- (I) GRAVEL ROAD (TYP) (7 / C-F-02)
- (J) 6" FLUSH VERTICAL CURB W/ 4" WIDE STRIPING (8 / C-F-02)
- (K) ADA STALL (TYP) (12 / C-F-02)
- (L) SIDEWALK RAMP (TYP) (13 / C-F-02)
- (M) 4" WIDE, SOLID WHITE THERMOPLASTIC STRIPE (TYP)
- (N) 4" WIDE STRIPING AT 45°, 36" O.C. (TYP)
- (O) PIPE BOLLARD (QUANTITIES SHOWN IN PARENTHESES) (SEE ARCHITECTURAL PLANS FOR LOCATIONS) (10,11 / C-F-02)
- (P) STOP BAR (TYP) (15 / C-F-02)
- (Q) STOP SIGN PER MUTCD R10-6
- (R) SPEED LIMIT SIGN PER MUTCD R2-1 (16 / C-F-02)
- (S) TYPE III BARRICADE (TYP) (17 / C-F-02)
- (T) SAWCUT AND MATCH EDGE OF EXISTING ASPHALT PAVEMENT SAND AND SEAL (TYP)
- (U) CONCRETE RIBBON DRAIN (SEE DRAINAGE PLAN) (10 / C-F-06)
- (V) JERSEY BARRIER (TYP)
- (W) ECOLOGY BLOCK 2'x2'x6' (TYP)
- (X) PLASTIBETON TELECOM TRENCH (TYP) (SEE TELECOM PLANS)
- (Y) STANDARD TO BARRIER CURB TRANSITION (9 / C-F-02)

SITE FEATURES (BY OTHERS)

- (B1) SITE LIGHTING (SEE ELECTRICAL PLANS)
- (B2) CAST IN PLACE CONCRETE WALL (SEE STRUCTURAL PLANS.)
- (B3) GENERATOR (TYP) (SEE ELECTRICAL PLANS)
- (B4) ELECTRICAL EQUIPMENT (TYP) (SEE ELECTRICAL PLANS)
- (B5) FUEL PAD (TYP) (SEE STRUCTURAL PLANS)
- (B6) PUMP HOUSE/COOLING TOWER (TYP) (SEE ARCHITECTURAL/MECHANICAL PLANS)
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- (F5) KNOX BOX (SEE SECURITY PLANS FOR DETAIL) (7 / C-F-03)
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Drawn	J. AL-KAHTANI
Checked	T. DARGAN
Date	18 SEPTEMBER 2014
PACLAND Project No.	[illegible]
M.S. Project No.	P.13969

Approvals

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Microsoft Cable Engineer — ERIC BEAL
Microsoft Electrical Engineer — STEVE STEINERT
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Security Manager — ERIC YANEZ
CSA — RICK HAGE

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Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER PAUL JEFFREY MANZER 18695 IOWA

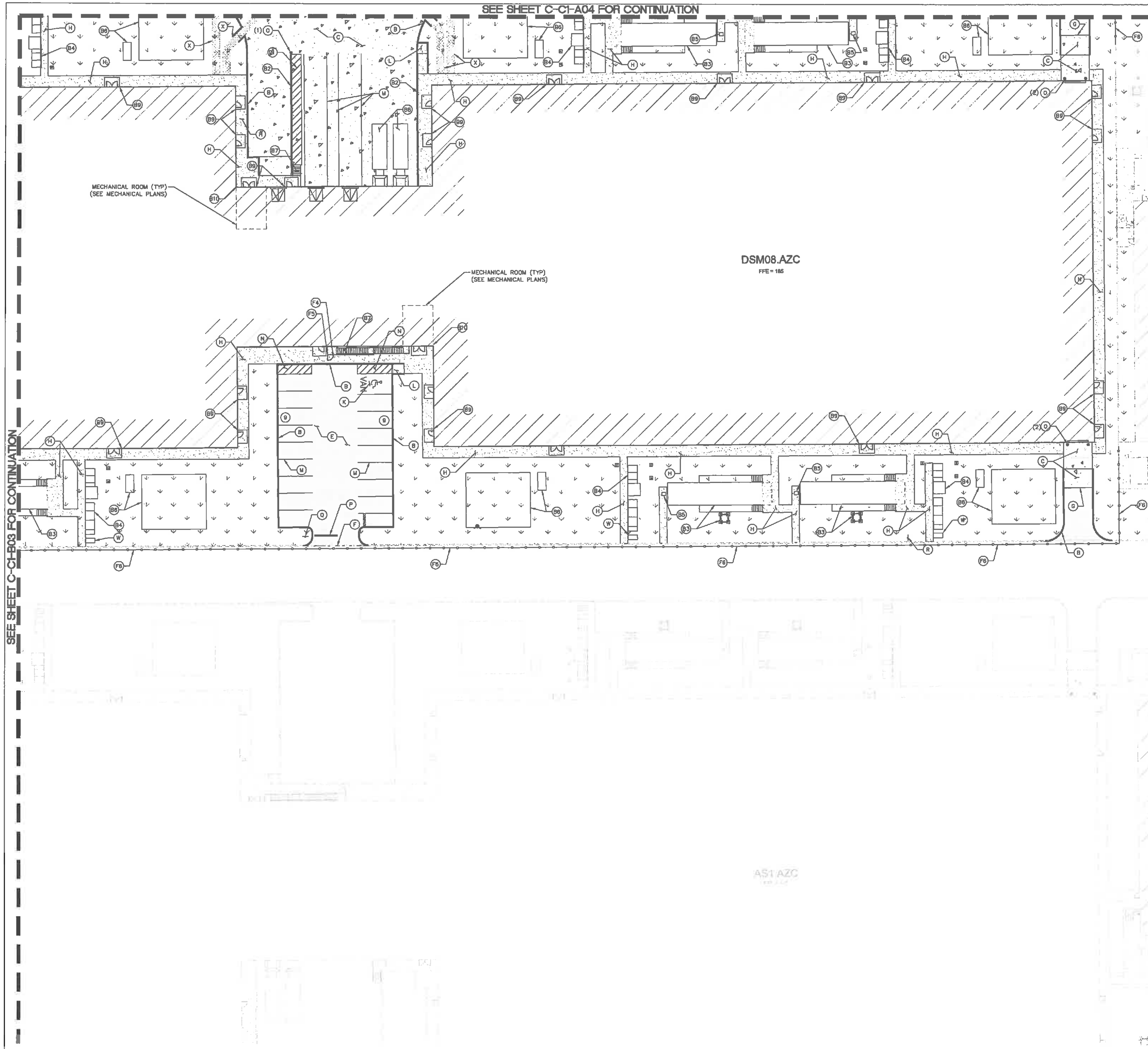
Key Plan

Bar Code

Sheet Title/Number

CIVIL SITE IMPROVEMENTS PLAN

C-C1-B03



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Drawn	J. AL-KAHTANI
Checked	T. GARGAN
Date	19 SEPTEMBER 2014
PACLAND Project No.	[illegible]
M.S. Project No.	P.13[illegible]

Approvals

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Microsoft Mechanical Engineer	PETER WANGIA	Date
Microsoft Civil Engineer	ERIC SEAL	
Microsoft Electrical Engineer	STEVE STEINERT	
Engineering Manager	ANDREW TAYLOR	
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Structural Engineering Lead	DAVID BROWN/ PKB	
Electrical Engineering/ BPMS Lead	CAMERON BROWN/ PAGE	
Mechanical Engineering Lead	JOHN CURRIE/ PAGE	
BAS Controls Lead	ANDY BAXTER/ PAGE	
Telecom Lead	NATE ELLIS/ SPARLING	
Security Lead	PETE BRETZKE/ ASG	

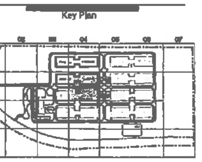
Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANZER
16895
IOWA

Key Plan

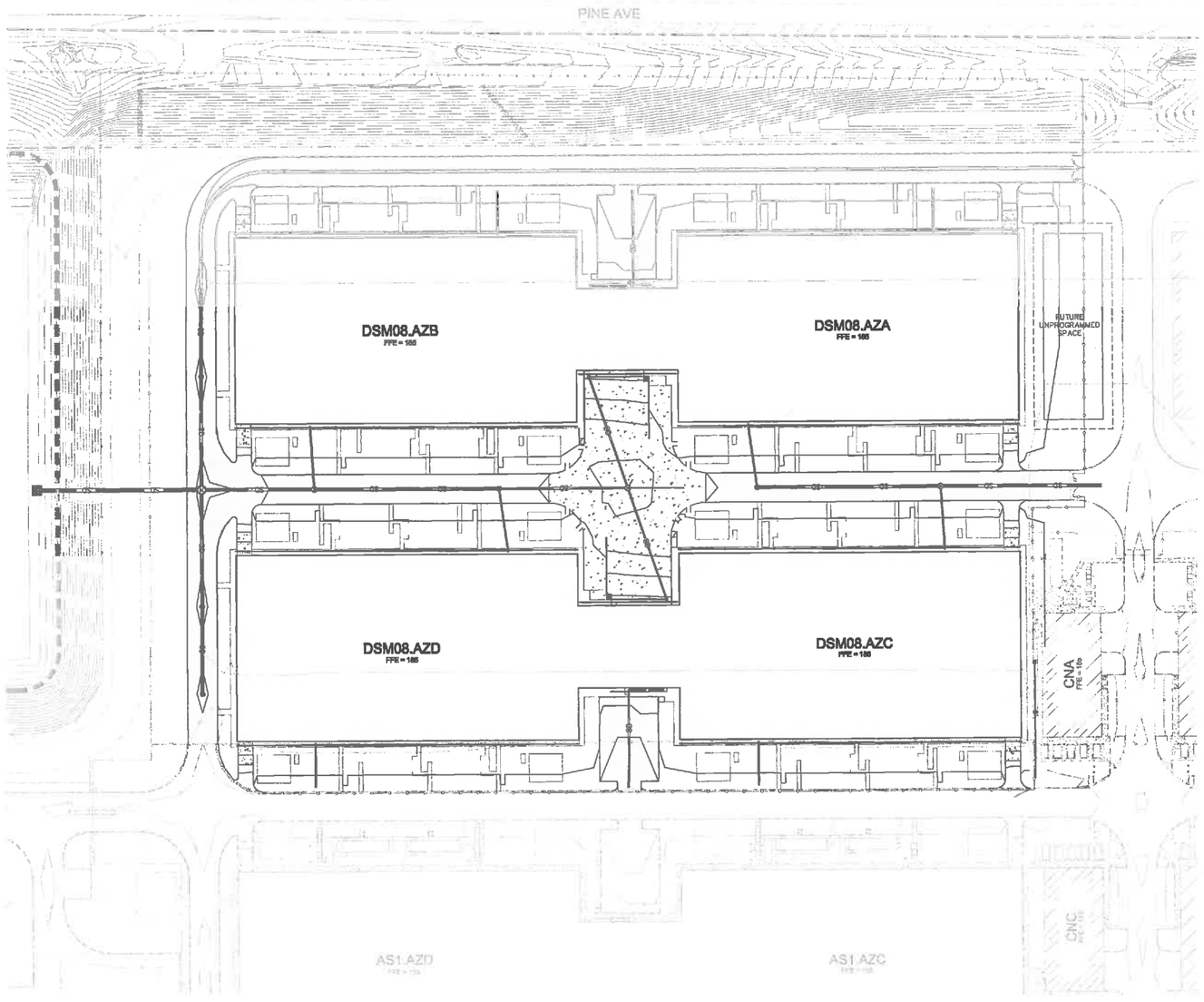


Bar Code

Sheet Title/Number

CIVIL SITE IMPROVEMENTS PLAN

C-C1-B04



GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 inch = 50 ft.

GRADING NOTES

1. THE SPOT ELEVATIONS INDICATED ON THIS PLAN REPRESENT THE DESIGN TOP OF PAVEMENT, UNLESS OTHERWISE NOTED.
2. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
3. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH LOCAL SPECIFICATIONS.
4. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED PER THE UBC CODE AND APPLICABLE LOCAL REGULATION. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS AND SHALL GRADE ALL AREAS TO PRECLUDE PONDING OF WATER.
6. ALL POLLUTANTS OTHER THAN SEDIMENT ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
7. PROPERTIES AND WATERWAYS DOWNSTREAM OF THE SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM PROJECT SITE.
8. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES.
9. CONTRACTOR TO REMOVE UNSUITABLE SOILS LOCATED WITHIN THE BUILDINGS SPLAY LINE OF THE FOOTINGS.
10. FOR BOUNDARY AND TOPOGRAPHIC INFORMATION REFER TO PROJECT SURVEY

STORM DRAINAGE NOTES

1. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS. PLEASE REFER TO OPERATIONS AND MAINTENANCE GUIDELINES WITHIN STORM DRAINAGE ANALYSIS.
2. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
3. STORM DRAINAGE PIPE WITH LESS THAN 2'-3" COVER SHALL BE CLASS IV REINFORCED CONCRETE PIPE, OR APPROVED EQUAL TO SUSTAIN H-20 LOADING.
4. ALL ONSITE STORM DRAINAGE PIPE SHALL BE SMOOTH WALLED INTERIOR, MANUFACTURER'S VERIFICATION OF MANNING'S ROUGHNESS COEFFICIENT N=0.012 OR LESS.
5. PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION.
6. CATCH BASIN INLET PROTECTION / EROSION CONTROL TO BE USED FOR ALL NEW INLETS.
7. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
8. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR CHANNEL FROM INVERT IN TO INVERT OUT, UNLESS OTHERWISE SHOWN IN THE CATCH BASIN DETAIL.
9. PERMANENT SITE CONVEYENCE STRUCTURES TO BE DESIGNED AND SPECIFIED DURING SITE PLAN APPROVAL.
10. CONTRACTOR TO FIELD VERIFY IE'S FOR ALL STUBS PROVIDED UNDER DSM05 CONTRACT AND INFORM ENGINEER WHETHER AS-BUILT CONDITIONS DIFFER FROM DESIGN ELEVATIONS.

ARCHEOLOGICAL NOTE

SHOULD ANY ARCHEOLOGICAL DEPOSITS BE FOUND ONSITE, GRADING SHOULD STOP AND THE ENGINEER OF RECORD SHOULD BE CONTACTED BEFORE FURTHER EARTH MOVING ACTIVITIES TAKE PLACE.

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Drawn	J. LA-KONTAKI
Checked	T. SARMAN
Date	18 SEPTEMBER 2014
PAGELAND Project No.	54301699
M.S. Project No.	P.13939

Approvals

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Microsoft Electrical Engineer	STEVE STEINERT
Engineering Manager	ANDREW TAYLOR
Security Manager	ERIC YANEZ
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	DESIGN TEAM
CIVIL Design Lead	Date
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Mechanical Engineering Lead	JOHN CURRIE/ PAGE
SAS Controls Lead	ANDY BAXTER/ PAGE
Fiberlink Lead	NATE ELLIS/ SPARLING
Security Lead	PIETE BRZEZINSKI ASG

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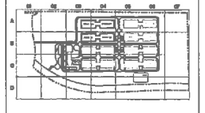

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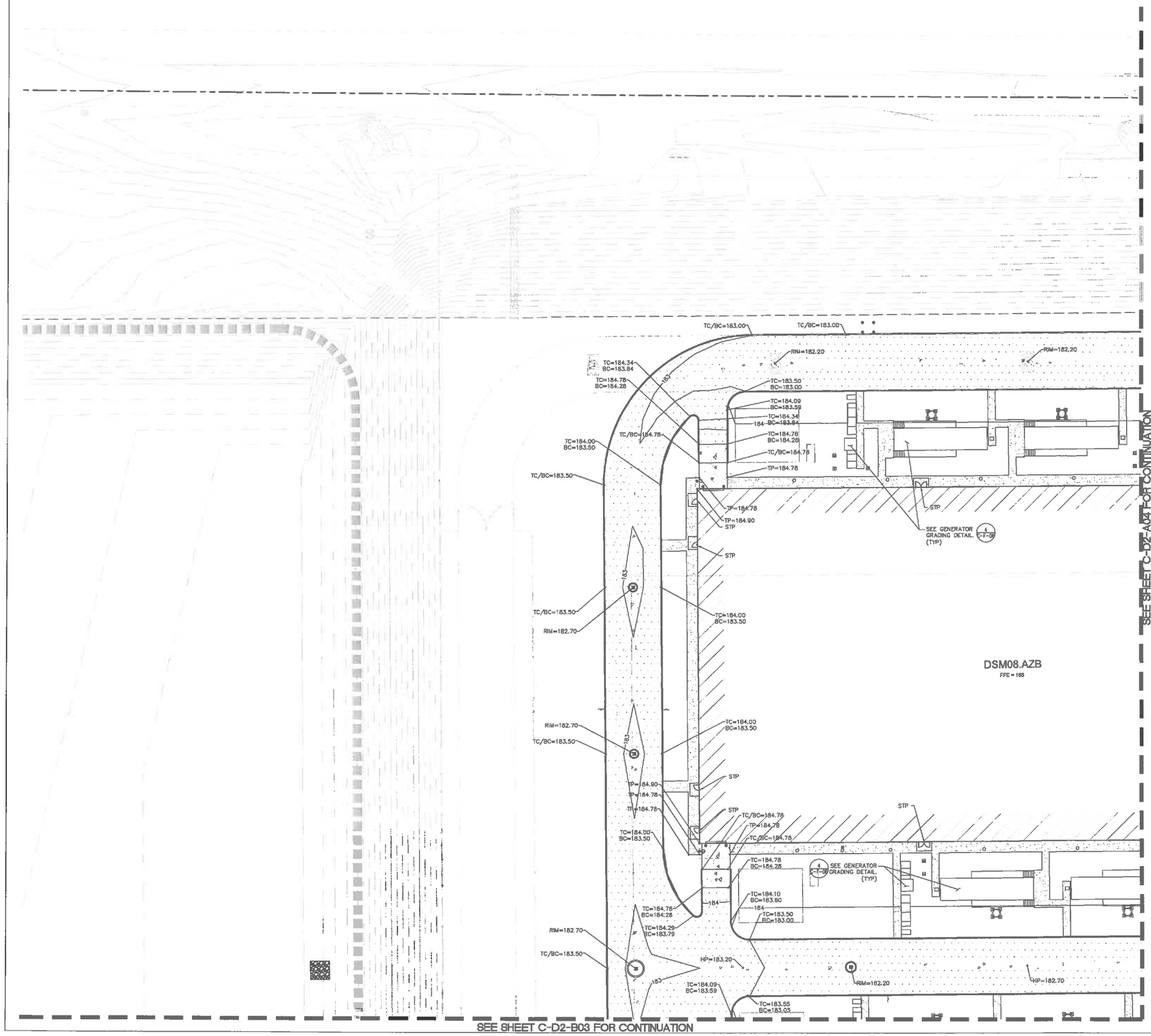
Sheet Title/Number

CIVIL SITE GRADING AND DRAINAGE PLAN OVERALL

C-D1-01



GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	RECTANGULAR AREA INTAKE
	CLEANOUT/WYE TO BUILDING SERVICE
	SUDAS CIRCULAR STORM SEWER MANHOLE
	SUDAS SW-403 AND SW-404 RECTANGULAR BASE STORM SEWER MANHOLE
	AREA DRAIN
	SEWER MANHOLE
GS=100.00	GROUND SPOT
TP=100.00	TOP OF PAVEMENT
TC=100.00	TOP OF CURB
BC=100.00	BOTTOM OF FACE OF CURB
TW=100.00	TOP OF WALL
BW=100.00	BOTTOM OF WALL
EG=100.00	EXISTING GROUND
T/PE=100.00	TOP OF PAD ELEVATION
T/CO=100.00	TOP OF CLEANOUT
RIM=100.00	RIM ELEVATION
HP=100.00	HIGH POINT
STP	DOOR STOOP (1,2,3 / C-F-08)

NOTE:

1. STORM CATCH BASIN RIMS SHOWN IN FUTURE DEVELOPMENT AREAS ARE 8" LOWER THAN FINAL RIM ELEVATIONS.
2. SEE DETAIL 8, 9, 10 ON SHEET C-F-03 FOR DETAILED GRADING AT PEDESTRIAN DOORS.
3. SEE DETAIL 7 ON SHEET C-F-08 FOR LOADING DOCK TRENCH DRAIN SECTION.

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Drawn	J. AL-KAKI/SMI
Checked	T. DARIAN
Date	13 SEPTEMBER 2014
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Microsoft, Cable Engineers	ERIC BEAL
Microsoft, Electrical Engineer	STEVE STEINERT
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Estimator/Lead	PETE SRETZKI/ ASG

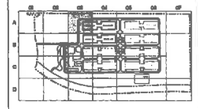
Revisions

No.	Date	Description
1	2014.10.24	100% B/C

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANZER
18685
IOWA

Key Plan



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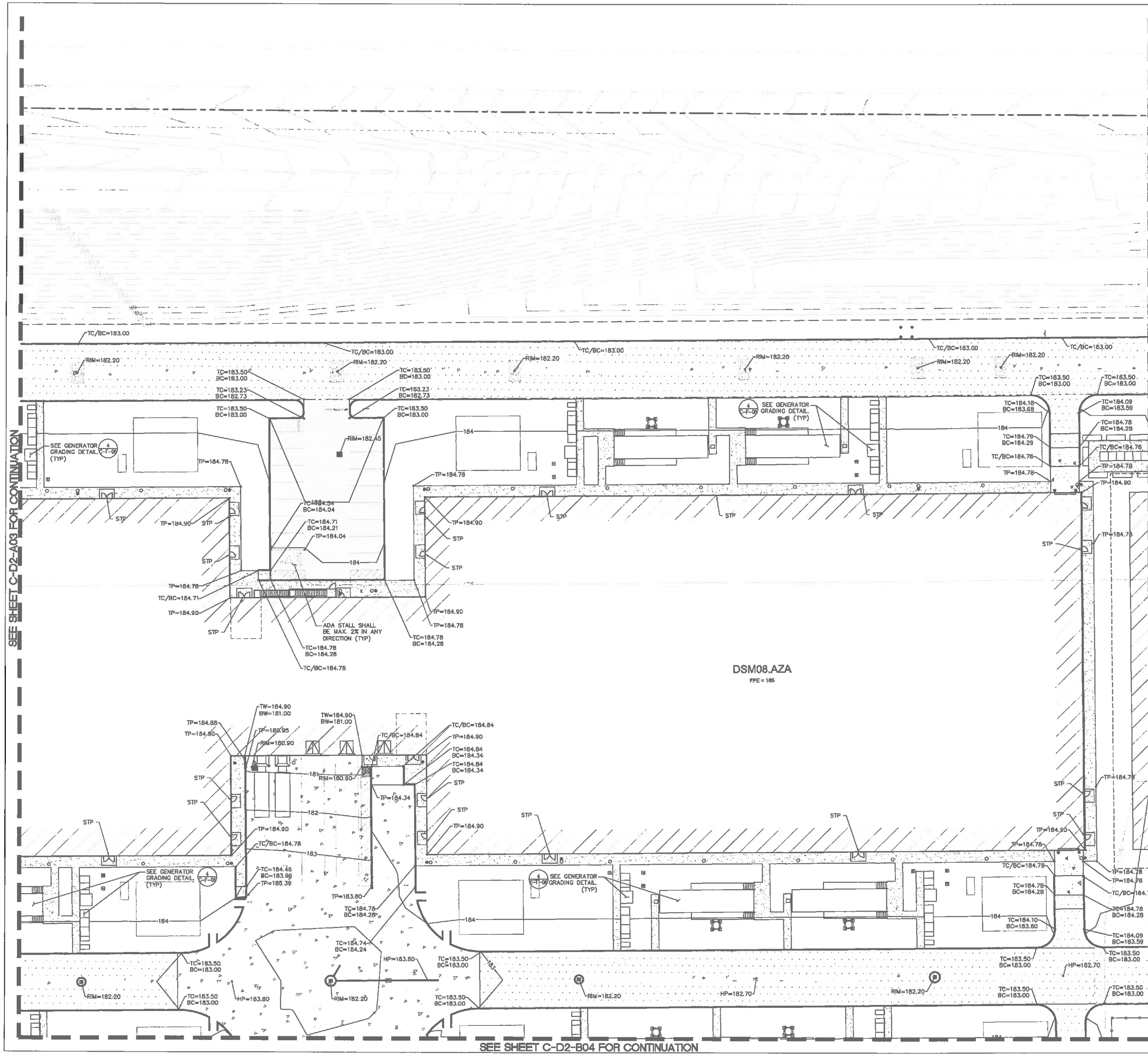
Sheet Title/Number

CIVIL FINISHED GRADING PLAN

C-D2-A03



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	RECTANGULAR AREA INTAKE
	CLEANOUT/WYE TO BUILDING SERVICE
	SUDAS CIRCULAR STORM SEWER MANHOLE
	SUDAS SW-403 AND SW-404 RECTANGULAR BASE STORM SEWER MANHOLE
	AREA DRAIN
	SEWER MANHOLE
GS=100.00	GROUND SPOT
TP=100.00	TOP OF PAVEMENT
TC=100.00	TOP OF CURB
BC=100.00	BOTTOM OF FACE OF CURB
TW=100.00	TOP OF WALL
BW=100.00	BOTTOM OF WALL
EG=100.00	EXISTING GROUND
T/PE=100.00	TOP OF PAD ELEVATION
T/CO=100.00	TOP OF CLEANOUT
RIM=100.00	RIM ELEVATION
HP=100.00	HIGH POINT
STP	DOOR STOOP (1,2,3 / C-F-08)

NOTE:

1. STORM CATCH BASIN RIMS SHOWN IN FUTURE DEVELOPMENT AREAS ARE 6" LOWER THAN FINAL RIM ELEVATIONS.
2. SEE DETAIL 8, 9, 10 ON SHEET C-F-03 FOR DETAILED GRADING AT PEDESTRIAN DOORS.
3. SEE DETAIL 7 ON SHEET C-F-08 FOR LOADING DOCK TRENCH DRAIN SECTION.

811 Know what's below. Call before you dig.

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PACLAND

Microsoft

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Checked	T. DARGAN
Date	15 SEPTEMBER 2014
PACLAND Project No.	[illegible]
M.R. Project No.	P.12[illegible]

Approvals

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Microsoft Electrical Engineer	STEVE STEINERT	
Engineering Manager	ANDREW TAYLOR	
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CSA	RICK HAGE	
	DESIGN TEAM	
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Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANZER
18695
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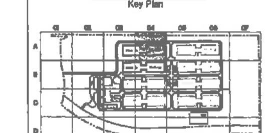
Key Plan



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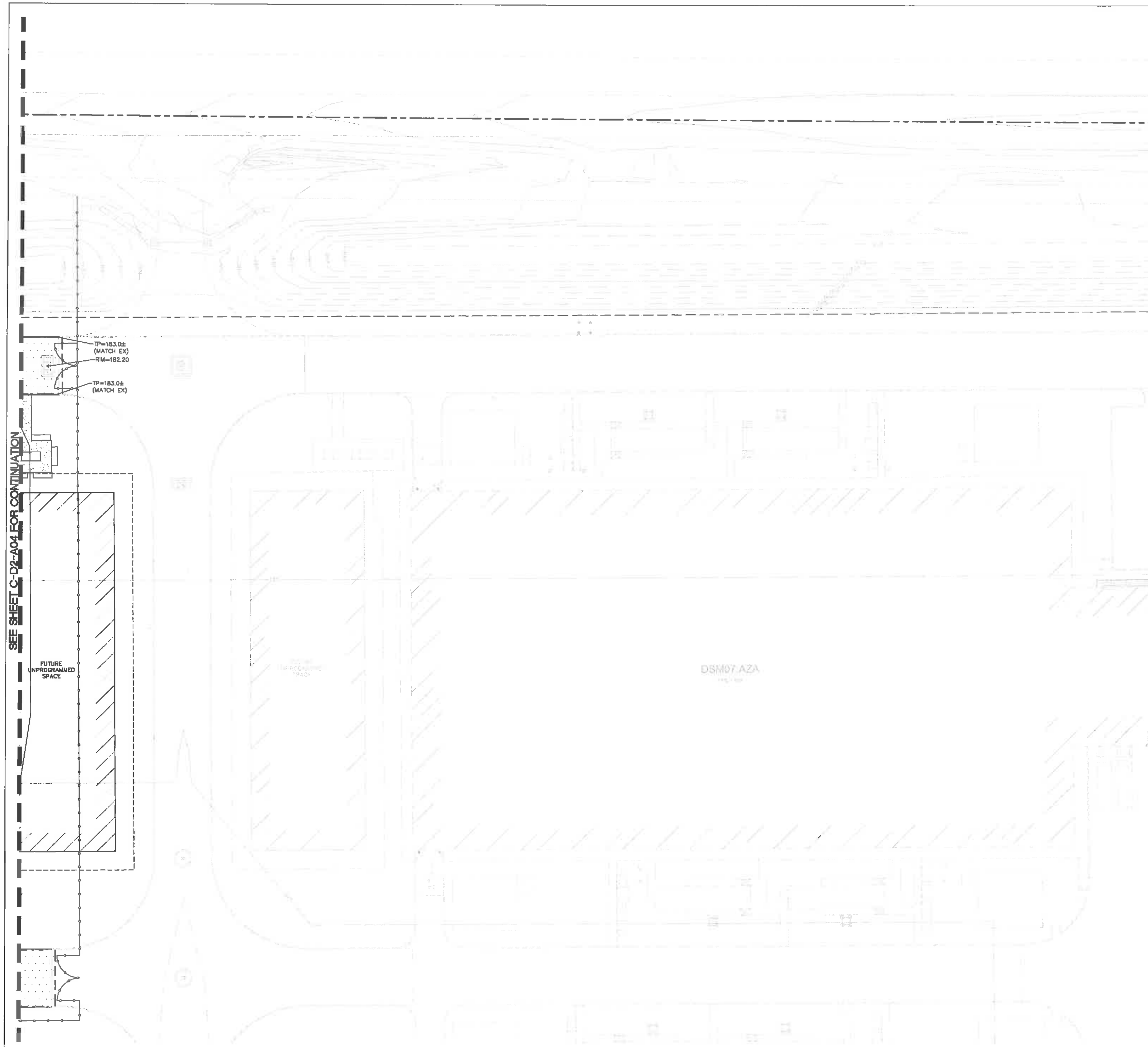
Sheet Title/Number

CIVIL FINISHED GRADING PLAN

C-D2-A04



GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	RECTANGULAR AREA INTAKE
	CLEANOUT/WYE TO BUILDING SERVICE
	SUDAS CIRCULAR STORM SEWER MANHOLE
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HP=100.00	HIGH POINT
STP	DOOR STOOP (1,2,3 / C-F-06)

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WEST DES MOINES, IA 50265

Design Team

Design: L. PALMER / J. AL-KAHTANI
Drawn: J. AL-KAHTANI
Checked: T. DARGAN
Date: 19 SEPTEMBER 2014

Approvals

CUSTOMER — Date

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Revisions

No.	Date	Description
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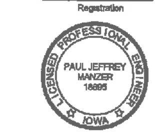
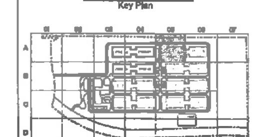
Registration



Key Plan



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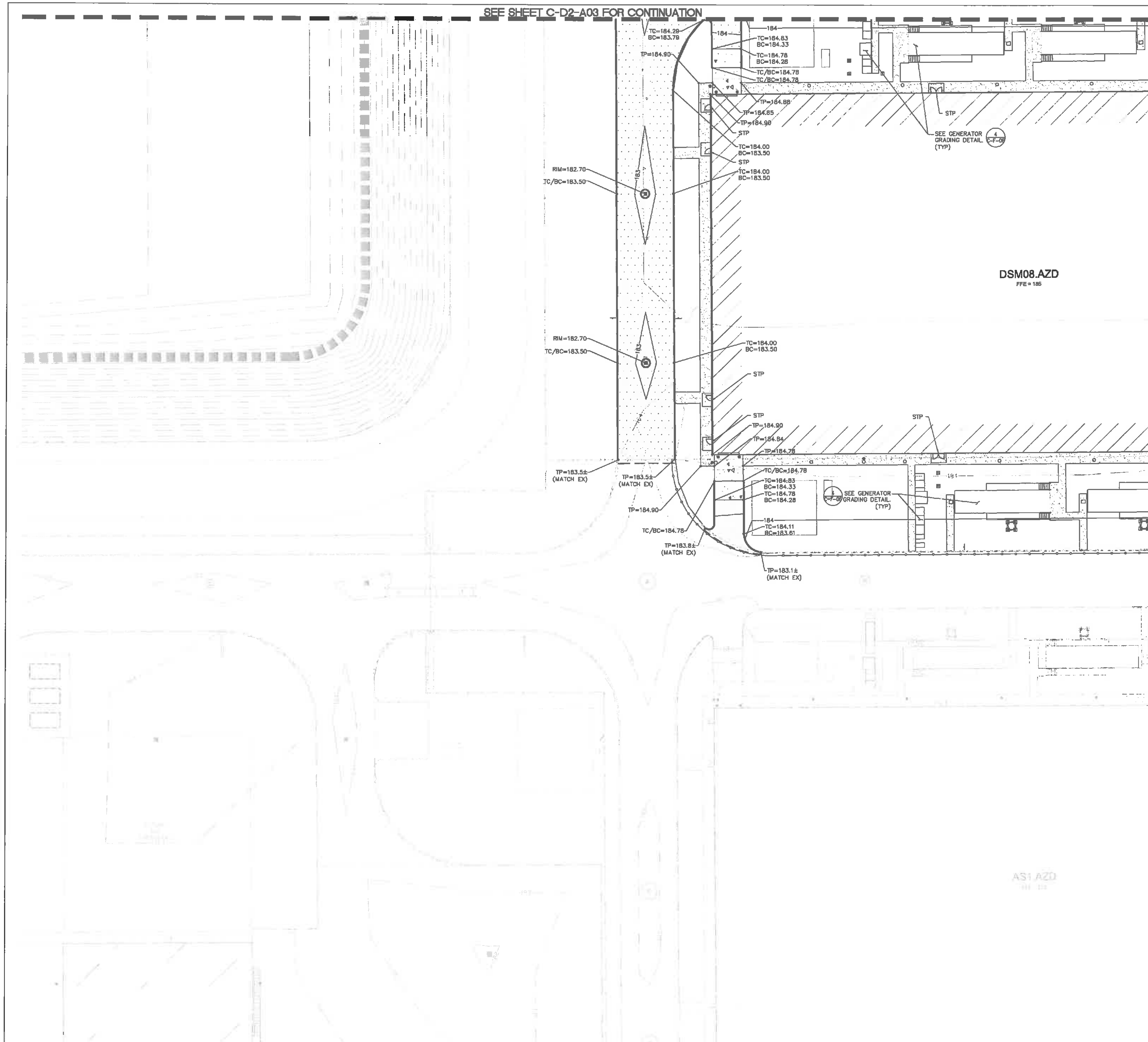
Sheet Title/Number

CIVIL FINISHED GRADING PLAN

C-D2-A05



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	RECTANGULAR AREA INTAKE
	CLEANOUT/WYE TO BUILDING SERVICE
	SUDAS CIRCULAR STORM SEWER MANHOLE
	SUDAS SW-403 AND SW-404 RECTANGULAR BASE STORM SEWER MANHOLE
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WEST DES MOINES, IA 50265

Design Team

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Drawn	J. AL-KANTANI
Date	19 SEPTEMBER 2014
M.S. Project No.	P.13090

Approvals

Customer	MICROSOFT	Date
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	ERIC BEAL	
	STEVE STEINERT	
Engineering Manager	ANDREW TAYLOR	
Security Manager	ERIC YANEZ	
CSA	RICK HAGE	

DESIGN TEAM

CSA Design Lead	JASON GILBERT/PAGE	Date
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18695
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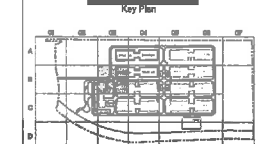

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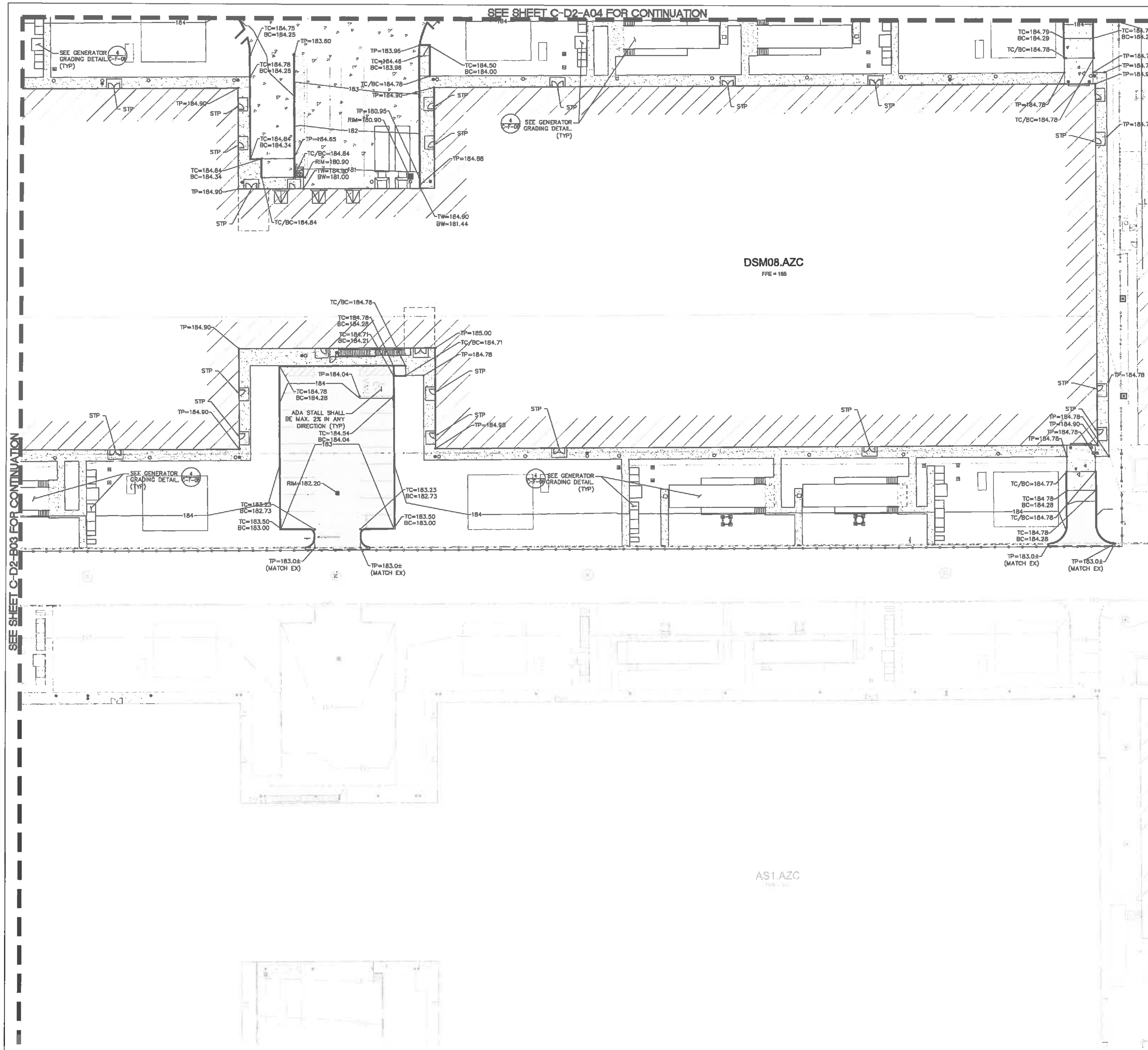
CIVIL FINISHED GRADING PLAN

C-D2-B03

SEE SHEET C-D2-A04 FOR CONTINUATION



SEE SHEET C-D2-B03 FOR CONTINUATION

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
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Design Team

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Drawn	J. AL-KAHTANI
Checked	T. DARGAN
Date	18 SEPTEMBER 2014
PACLAND Project No.	[illegible]
M.S. Project No.	[illegible]

Approvals

CUSTOMER	MICROSOFT	Date
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Microsoft Cable Engineer	ERIC BEAL	
Microsoft Electrical Engineer	STEVE STEINERT	
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Revisions

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PAUL JEFFREY MANZER 18695 LICENSED PROFESSIONAL ENGINEER IOWA

Key Plan

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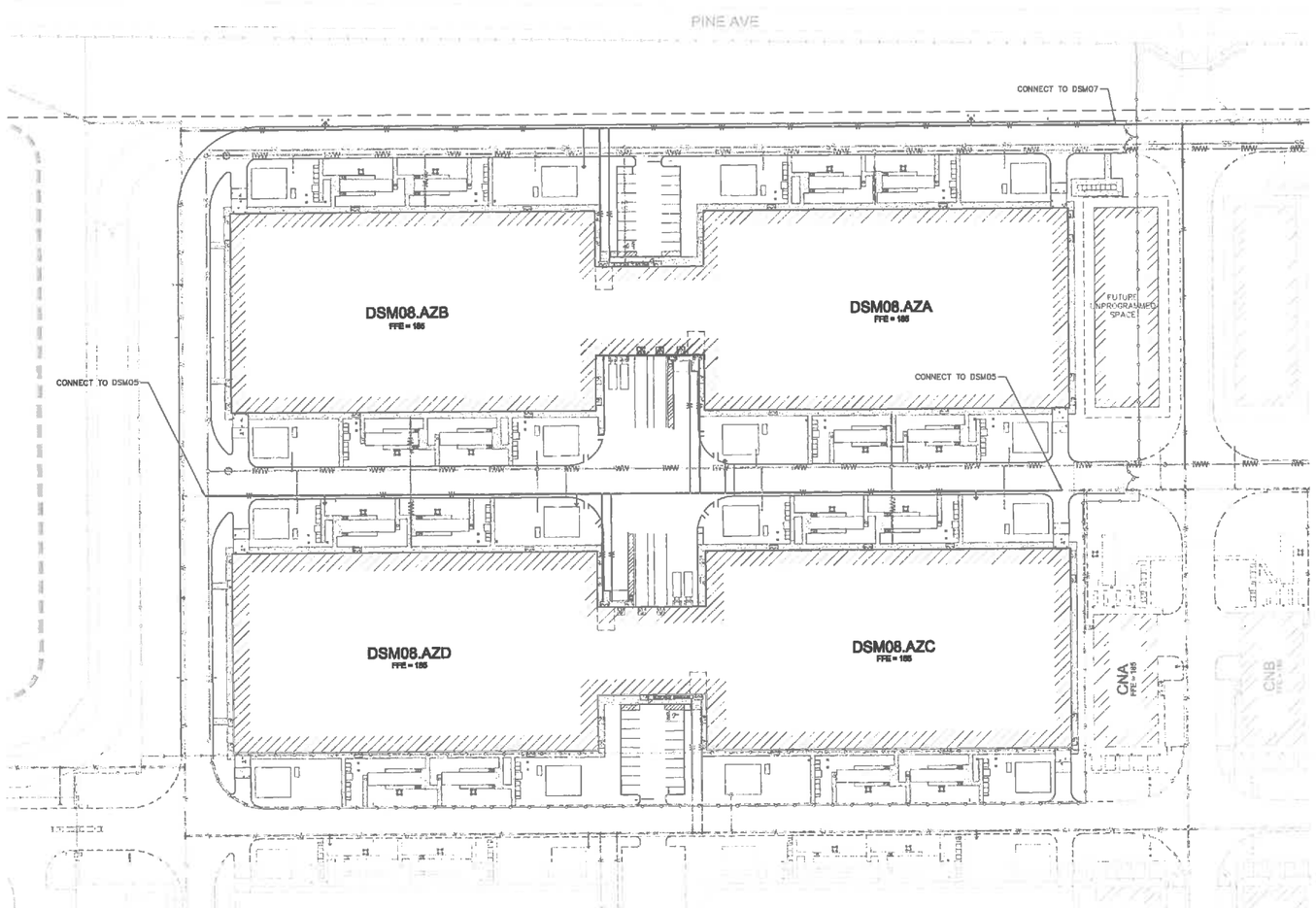

GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 inch = 50 ft.

CITY OF WEST DES MOINES STANDARD NOTES

1. ALL WATER WORK, PUBLIC OR PRIVATE, SHALL BE DONE IN ACCORDANCE WITH WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS AT LEAST ONE WEEK PRIOR TO BUILDING CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
4. CONTACT BUILDING INSPECTION (515-222-3630) A MINIMUM OF 24 HOURS IN ADVANCE FOR PRIVATE UTILITY INSTALLATION INSPECTIONS.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE WEST DES MOINES WATER WORKS AND THE CITY'S CROSS CONNECTION CONTROL/CONTAINMENT PROVISION (UTILITY SHEET ONLY).
6. DESIGNATED BUFFERS SHALL BE LABELED AS A "NO BUILD AREA".

GENERAL NOTES

A. DIMENSIONS AND COORDINATES ARE TO FACE OF CURB (TYP).
B. UTILITY INSTALLATION INCLUDES TRENCHING, PIPE BEDDING AND BACKFILL. REINSTATE SURFACE TO ORIGINAL CONDITION SHOWN ON SITE IMPROVEMENTS PLAN.
C. PROVIDE THRUST BLOCKS/JOINT RESTRAINTS ON ALL PRESSURIZED LINES. SEE DETAIL 4/C-F-11 FOR JOINT RESTRAINTS.
D. FIELD VERIFY LIMITS OF DEMOLITION & LOCATION OF UTILITIES TO BE REMOVED.
E. FIELD VERIFY CONNECTION POINTS TO EXISTING UTILITIES. NOTIFY ENGINEER OF DISCREPANCIES FROM PLAN OF RECORD.
F. EXISTING GRADES SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
G. CONTRACTOR RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE TO STORM DRAIN SYSTEM UNTIL PERMANENT STORM DRAIN SYSTEM IS INSTALLED.
H. ROADWAY AND PAVEMENT STRIPING SHOWN IN APPROXIMATE LOCATIONS, SCALE DRAWING FOR PLACEMENT.
I. TELECOM, ELECTRICAL & LSS SHOWN FOR REFERENCE ONLY. FIELD VERIFY LOCATIONS PRIOR TO EXCAVATION.
J. ADJUST UTILITY STRUCTURES (PIV'S, HYDRANTS, MH'S, CB'S, VAULTS ETC) TO FINISH GRADE WHEN COMPLETING FINAL GRADING. ELECTRICAL AND TELECOM VAULTS TO BE ADJUSTED TO FINISHED GRADE WITH GRADE RINGS.
K. UNLESS OTHERWISE DIRECTED BY THE OWNER OR BY THE A/E, THE CONTRACTOR SHALL REPLACE, IN KIND, ALL BASE, AC PAVING, CONCRETE CURBS, GUTTERS AND SIDEWALKS, UTILITIES, LANDSCAPING, AND IRRIGATION LINES, NOT INTENDED FOR DEMOLITION, BUT WHICH HAVE BEEN REMOVED OR DISTURBED AS A RESULT OF DEMOLITION ACTIVITIES.
L. WHERE DEMOLITION OCCURS AND NO SPECIFIC INSTRUCTIONS ARE MADE CONCERNING NEW OR REPLACEMENT FEATURES, THE CONTRACTOR SHALL RESTORE THE AREA TO A FINISHED CONDITION USING MATERIALS MATCHING THOSE ADJACENT TO THE REMOVAL SITE, MAKING SURE PROPER DRAINAGE AND APPEARANCE IS ATTAINED.
M. COORDINATE INSTALLATION OF ELECTRICAL GROUNDING GRID AT SITE & BLDG SLABS, FENCING AND WALLS WITH ELECTRICAL DRAWINGS.
N. SEE LANDSCAPE PLANS FOR SEEDING AND ROCK SURFACING.

WATER APPURTENANCES (FOR WDMWW USE)

16" C900 PVC PIPE	3186 LF
8" C900 PVC PIPE	494 LF
8" DI PIPE	0 LF
8" DI PIPE	172 LF
4" C900 PVC PIPE	494 LF
4" DI PIPE	0 LF
2.5" CP PIPE	0 LF
16"X16" CROSS W. BLOCKING	0
16"X16" TEE W/ BLOCKING	2
16"X8" TEE W/ BLOCKING	5
16"X6" TEE W/ BLOCKING	13
16"X4" TEE W/ BLOCKING	5
16"X2.5" SERVICE SADDLE	0
8"x6" TEE W/ BLOCKING	0
16" 90° BEND W/ BLOCKING	1
6" 90° BEND W/ BLOCKING	0
4" 90° BEND W/ BLOCKING	0
FIRE DEPARTMENT CONNECTION (FDC)	2
FIRE HYDRANT	12
16" GATE VALVE	24
8" GATE VALVE	0
6" GATE VALVE	13
4" GATE VALVE	5
2.5" GATE VALVE	0
16" PLUGS	1
8" PLUGS	1
6" PLUGS	1
4" PLUGS	1
2.5" CAP	0
16" BLOW OFF ASSEMBLY	1

WATER NOTES

1. WATER MAIN PIPE WILL TYPICALLY BE EITHER POLYVINYL CHLORIDE (PVC) PIPE OR DUCTILE IRON PIPE (DIP); AND MEET AWWA STANDARDS.

   WHERE DISTRIBUTION SYSTEMS AND SERVICE CONNECTIONS ARE INSTALLED IN AREAS OF GROUNDWATER CONTAMINATION BY ORGANIC COMPOUNDS, PIPE AND JOINT MATERIALS (NON-PVC PIPE) THAT DO NOT ALLOW PERMEATION OF THE ORGANIC COMPOUNDS SHOULD BE USED.
2. WATER MAINS SHOULD BE EXTENDED TO THE PLAT OR PROPERTY BOUNDARIES, TO THE NEXT STREET, OR AS DIRECTED BY THE JURISDICTION.
3. NEW MAIN INSTALLATION SHOULD BE IN THE PARKING AREA (BETWEEN THE CURB AND THE PROPERTY LINE) OF THE RIGHT-OF-WAY AND MINIMUM OF 4 FEET BEHIND THE CURB. WHERE POSSIBLE, WATER MAINS SHOULD BE LOCATED ALONG THE SOUTH AND EAST SIDES OF THE STREET.
4. DEAD-ENDS SHOULD BE MINIMIZED BY LOOPING MAINS WHENEVER POSSIBLE. DEAD-ENDS SHOULD TERMINATE WITH AN APPROVED FLUSHING DEVICE (BLOW-OFF, HYDRANT, FLUSHING HYDRANT). THEY MAY TERMINATE WITH AN APPROVED FIRE HYDRANT WHEN ADEQUATE PRESSURE IS AVAILABLE AT REQUIRED FLOWS. FOR MAINTENANCE CONSIDERATIONS AND WHEN ADEQUATE FIRE FLOWS ARE NOT AVAILABLE, FLUSHING HYDRANTS MAY BE ALLOWED BY THE JURISDICTION WITH THE HYDRANT OUTLET SIZED AND ARRANGED TO PREVENT THE ATTACHMENT OF FIRE HOSES. UNLESS REQUIRED BY A JURISDICTION, PERMANENT INLINE SHUT-OFF VALVES SHOULD NOT BE PLACED AT THE END OF DEAD-END MAINS.
5. WATER MAINS AND EXTENSIONS SHOULD BE DESIGNED WITH A MINIMUM COVER OF FIVE (5) FEET, UNLESS MORE OR LESS COVER HAS BEEN APPROVED BY THE JURISDICTION ENGINEER.
6. A BLOWOFF OR APPROVED FLUSHING DEVICE SHOULD BE REQUIRED ON ALL DEAD-END MAINS WHERE A HYDRANT IS NOT INSTALLED. THE MINIMUM RISER ASSEMBLY SIZE SHOULD BE NO LESS THAN 2 DIAMETER SIZES SMALLER THAN THE DIAMETER OF THE WATER MAIN. WHEN THE WATER MAIN IS EXTENDED, THE BLOWOFF SHOULD BE REMOVED. A NEW VALVE SHOULD BE PLACED BETWEEN THE EXISTING AND EXTENDED MAIN.
7. AS A MINIMUM, VALVES SHOULD BE LOCATED AT INTERSECTIONS, SUCH THAT ONLY ONE UNVALVED PIPE EXISTS AT THE INTERSECTION. VALVES SHOULD BE EQUALLY SPACED, IF POSSIBLE, WITH SPACING NO MORE THAN 800 FEET IN RESIDENTIAL AREAS AND NO MORE THAN 400 FEET IN HIGH DENSITY AREAS. VALVES SHOULD NOT BE LOCATED IN THE SIDEWALK LINE OR IN DRIVEWAYS AND ALL VALVES SHOULD BE INSTALLED WITH VALVE BOXES.
8. NO VALVES (EXCEPT BLOWOFF VALVES) SHOULD BE PLACED AT THE END OF A DEAD-END MAIN UNLESS REQUIRED BY A JURISDICTION. A VALVE SHOULD BE INSTALLED BETWEEN THE EXISTING MAIN AND NEW MAIN WHEN THE MAIN IS EXTENDED. INTERMEDIATE VALVES MAY BE REQUIRED BY THE JURISDICTION TO PROVIDE REQUIRED VALVE SPACING. A TAPPING SLEEVE AND VALVE SHOULD BE USED WHEN MAKING A PERPENDICULAR CONNECTION TO AND EXISTING MAIN.
9. HYDRANTS SHOULD COMPLY WITH AWWA C502. THE CONNECTING PIPE BETWEEN THE SUPPLY MAIN AND THE HYDRANTS SHOULD BE A MINIMUM OF 6 INCHES IN DIAMETER AND BE INDEPENDENTLY VALVED. FIRE HYDRANTS SHOULD NOT BE INSTALLED ON WATER MAINS THAT DO NOT PROVIDE MINIMUM PRESSURE.
10. HYDRANT DRAINS SHOULD NOT BE CONNECTED TO OR LOCATED WITHIN 10 FEET OF SANITARY SEWERS. LOCATIONS OF FIRE HYDRANTS ARE GOVERNED BY THE RULES AND REGULATIONS OF THE IDNR AND THE LOCAL JURISDICTION. SEE DESIGN MANUAL, CHAPTER 4 SECTION E.
11. WATER SERVICE STUBS FOR EACH BUILDING OR PLATTED LOT SHOULD BE PROVIDED, INCLUDING CORPORATE STOP, SERVICE LINE, AND CURB STOP WITH BOX. THE SERVICE STUB FROM THE WATER MAIN TO THE SHUT-OFF WILL NORMALLY BE 6 FEET FROM THE PROPERTY LINE OR 1 FOOT FROM THE STREET SIDE OF SIDEWALK.
12. BEFORE GOING INTO SERVICE, ALL NEW MAINS SHALL BE ADEQUATELY FLUSHED, PRESSURE TESTED, AND DISINFECTED ACCORDING TO THE RULES AND REGULATIONS OF THE LOCAL JURISDICTION AND THE IDNR. THE PROCEDURES, ONCE APPROVED BY THE JURISDICTION, SHOULD BE CONDUCTED UNDER THE SUPERVISION OF THE JURISDICTION OR DESIGNATED REPRESENTATIVE.

SANITARY SEWER NOTES

1. PIPE SIZES 15 INCHES AND SMALLER SHOULD CARRY THE PEAK FLOW AT A DEPTH OF NO MORE THAN 0.67 OF THE PIPE DIAMETER. PIPE SIZES GREATER THAN 15 INCHES SHOULD CARRY THE PEAK FLOW AT A DEPTH OF NO MORE THAN 0.75 OF THE PIPE DIAMETER.
2. PUBLIC SEWERS SHOULD HAVE A SUFFICIENT GRADE TO MAINTAIN 2 FPS AT PEAK FLOW. MINIMUM GRADE ON BUILDING SANITARY SEWER STUBS SHOULD BE 1/8 INCH PER FOOT.
3. GRAVITY SANITARY SEWERS SHOULD NOT BE LESS THAN 8 INCHES IN DIAMETER. MINIMUM SIZE OF BUILDING SANITARY SEWER STUB SHOULD BE 4 INCHES IN DIAMETER FOR RESIDENTIAL AND 6 INCHES IN DIAMETER FOR COMMERCIAL. THE SIZE WILL INCREASE BASED ON THE PROPOSED NUMBER OF FIXTURES THAT THE SEWER STUB SERVES.
4. SANITARY SEWER CROSSINGS OF STORM SEWERS SHOULD HAVE NO LESS THAN 6 INCHES OF CLEARANCE. SPECIAL STRUCTURAL SUPPORT WILL BE REQUIRED IF THERE IS LESS THAN 18 INCHES CLEARANCE. THE MINIMUM HORIZONTAL CLEARANCE SHOULD BE 5 FEET. CLEARANCE REFERS TO THE DISTANCE FROM THE OUTSIDE OF THE SANITARY SEWER PIPE TO THE OUTSIDE OF THE STORM SEWER PIPE.
5. GRAVITY SEWER MAINS SHALL BE SEPARATED FROM WATER MAINS BY A HORIZONTAL DISTANCE OF AT LEAST 10 FEET UNLESS, THE TOP OF A SEWER MAIN IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, AND THE SEWER IS PLACED IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH AT A MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM THE WATER MAIN.
6. SEPARATION OF SEWER AND WATER MAIN CROSSOVERS. VERTICAL SEPARATION OF SANITARY SEWERS CROSSING UNDER ANY WATER MAIN SHOULD BE AT LEAST 18 INCHES WHEN MEASURED FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN. IF PHYSICAL CONDITIONS PROHIBIT THE SEPARATION, THE SEWER MAY BE PLACED NOT CLOSER THAN 6 INCHES BELOW A WATER MAIN OR 18 INCHES ABOVE A WATER MAIN. THE SEPARATION DISTANCE SHALL BE THE MAXIMUM FEASIBLE IN ALL CASES.
7. SHOULD PHYSICAL CONDITIONS EXIST SUCH THAT EXCEPTIONS ARE NECESSARY, THE DESIGN ENGINEER MUST DETAIL HOW THE SEWER AND WATER MAIN ARE TO BE ENGINEERED TO PROVIDE PROTECTION EQUAL TO THAT REQUIRED.
8. MANHOLES IN STREET RIGHT OF WAY MUST BE LOCATED IN AREAS WHICH ALLOW DIRECT ACCESS BY MAINTENANCE VEHICLES. AREAS OUTSIDE THE STREET RIGHT OF WAY SHOULD BE SUBJECT TO THE APPROVAL OF THE JURISDICTIONAL ENGINEER.
9. THE MINIMUM SIZE FOR A MANHOLE IS 48 INCHES IN DIAMETER. CHECK MANHOLE SIZE ACCORDING TO SECTION 3C-1. MOST JURISDICTIONS REQUIRE ECCENTRIC MANHOLES, WITHOUT BUILT-IN STEPS, WITH THE MANHOLE OPENING OVER THE CENTERLINE OF THE PIPE OR ON AN OFFSET NOT TO EXCEED 12 INCHES.
10. ANY SERVICE LINE CONNECTIONS TO MANHOLES REQUIRE APPROVAL FROM THE JURISDICTION. THE SERVICES MAY NOT ENTER THE MANHOLE AT GREATER THAN 2 FEET ABOVE THE INVERT OF THE OUTLET. SEWER FLOW CHANNELS IN THE MANHOLE BOTTOM MUST BE PROVIDED FOR ALL SERVICES.

WATER MAIN SHALL BE INSTALLED AT MINIMUM 5' OF COVER

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CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS, RALPH RENTERIA, ENGINEERING TECHNICIAN (515-222-3465) WITHIN 24 HOURS OF INSTALLATION AND TESTING OF ALL BACKFLOW DEVICES TO SCHEDULE FINAL INSPECTION.

CITY OF WEST DES MOINES

APPROVED BY: DATE:

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WEST DES MOINES,IA 50265

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Drawn	J.ALCANTARA
Checked	T.DARNALL
Date	19 SEPTEMBER 2014
PAGELAND Project No.	5626789
M.S.Project No.	P_13999

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Mechanical Engineering Lead	CAMERON BROWN/ PAGE
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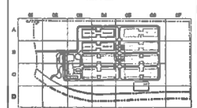
Revisions

No.	Date	Description
1	2015.07.24	100% IPC

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANDER
19695
IOWA

Key Plan



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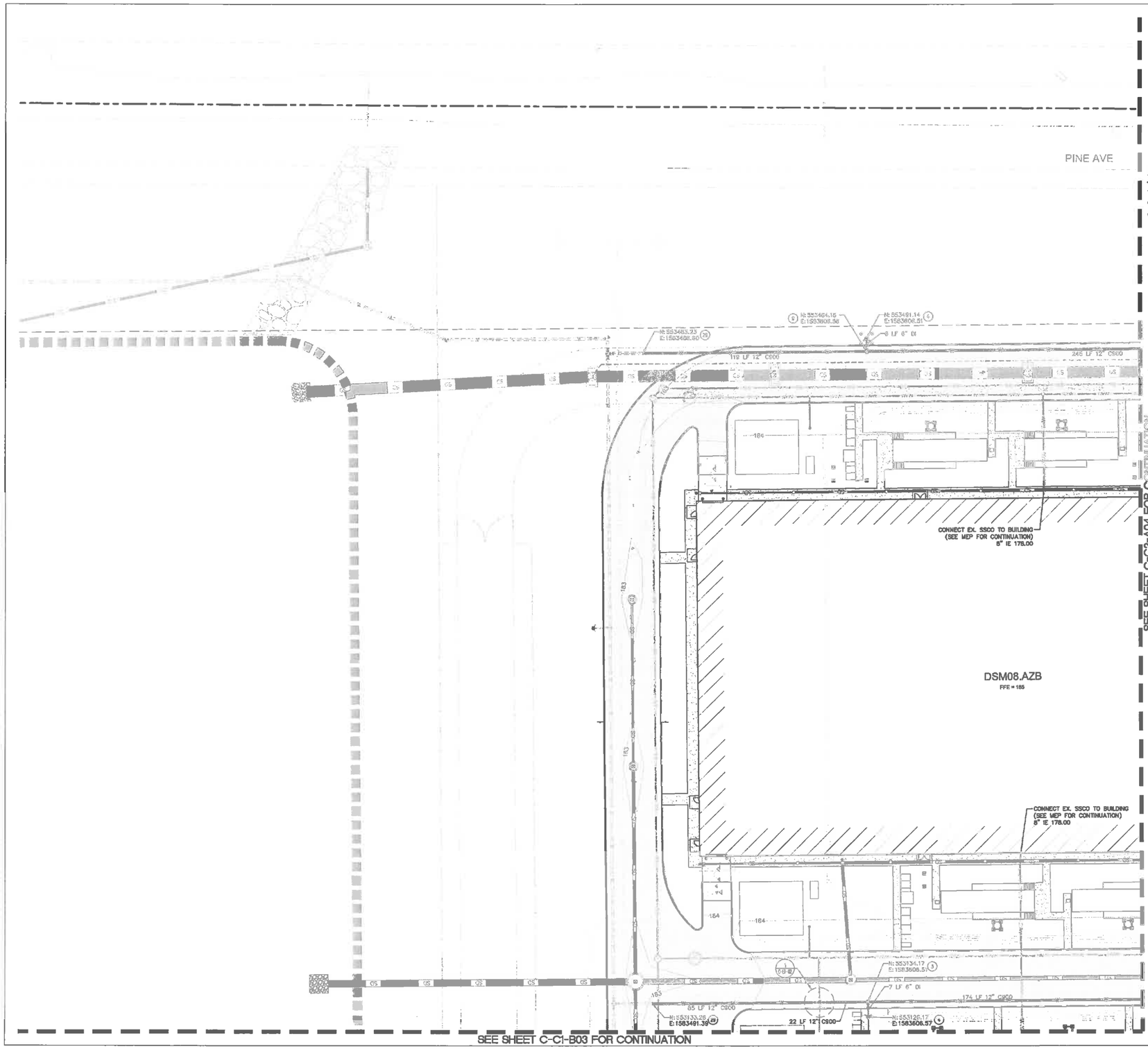
Sheet Title/Number

CIVIL WATER PLAN OVERALL

C-E1-01



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- DOMESTIC WATER PIPE
- INDUSTRIAL TREATED WATER PIPE
- TEE/BEND W/ THRUST BLOCKING (4 / C-F-08)
- GATE VALVE (3 / C-F-08)
- FIRE HYDRANT (3 / C-F-08)
- VERTICAL BENDS (1-3 / C1-C)
- EX. SANITARY SEWER PIPE
- EX. INDUSTRIAL WASTE WATER PIPE
- EX. MW/SANITARY SEWER MANHOLE
- CLEANOUT

FITTING SCHEDULE

1. CONNECT TO FUTURE 16" CITY WATER MAIN
   1–16"x16" TAPPING TEE(FLxMJ)
   1–16" GATE VALVE (FLxMJ)
   THRUST BLOCKING W/ MARKER
2. 1–16"x16" TEE (FL)
   3–16" GATE VALVE (FLxMJ)
   THRUST BLOCKING
3. 1–12"x6" TEE (FLxMJ)
   1–6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
4. 1–FIRE HYDRANT ASSEMBLY
5. 1–16"x8" TEE (FL)
   2–16" GATE VALVE (FLxMJ)
   1–8" ADAPTOR (FLxMJ)
   THRUST BLOCKING
6. 1–8"x8" TEE (FLxMJ)
   1–8" PLUG (MJ)
   1–6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
7. 1–16"x6" TEE (FL)
   2–16" GATE VALVE (FLxMJ)
   1–6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
8. 1–12" 90° BEND (MJ)
   THRUST BLOCKING
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   1–12" GATE VALVE (FLxMJ)
   1–6" GATE VALVE (FLxMJ)
   1–12" ADAPTOR (FLxMJ)
   THRUST BLOCKING
10. 1–12"x4" TEE (FLxMJ)
    1–4" GATE VALVE (FLxMJ)
    THRUST BLOCKING
11. CONNECT TO BUILDING (SEE MEP FOR CONTINUATION)
12. 1–12"x8" TEE (FL)
    2–12" GATE VALVE (FLxMJ)
    1–8" ADAPTOR (FLxMJ)
    THRUST BLOCKING
13. 1–16" PLUG (MJ) W/ MARKER & BLOW-OFF ASSEMBLY
    THRUST BLOCKING
    (STUB FOR PHASES)
14. 1–16"x16" CROSS (FL)
    4–16" GATE VALVE (FLxMJ)
    THRUST BLOCKING
15. 1–16"x2.5" SERVICE SADDLE
16. 1–2.5" GATE VALVE (RSGV)
    1–2.5" CAP W/ MARKER
17. 1–16"x4" TEE (FL)
    1–16"x2.5" SERVICE SADDLE
    2–16" GATE VALVE (FLxMJ)
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30. 1–4" 45° BEND (MJ)
    THRUST BLOCKING
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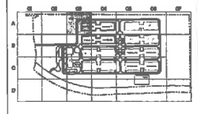
Security Lead	PETE BRETZKE/ ABG

Revisions

No.	Date	Description
3	2015.07.24	100% IFC

Registration

Key Plan



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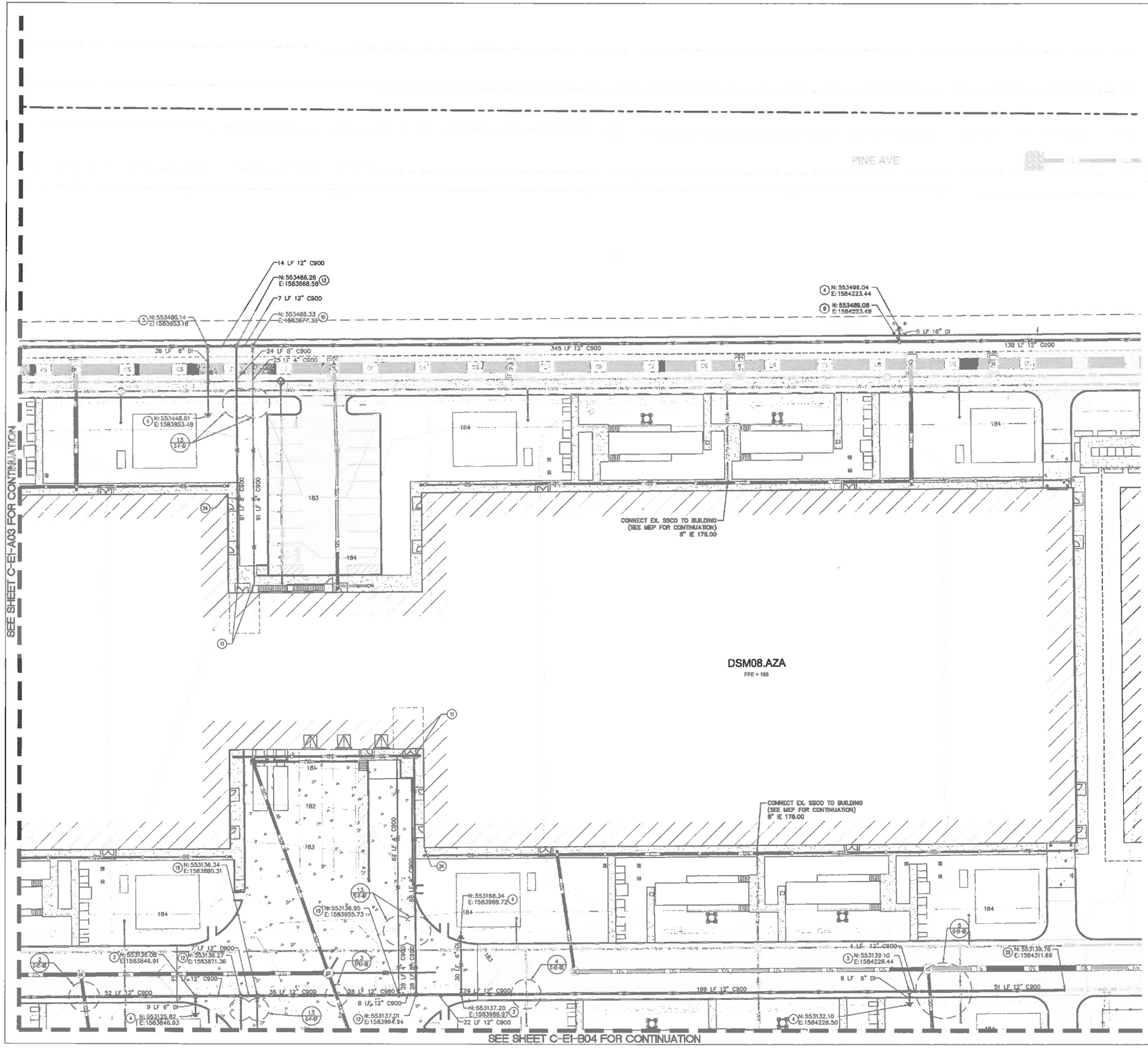
Sheet Title/Number

CIVIL WATER AND SEWER PLAN

C-E1-A03



LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- DOMESTIC WATER PIPE
- INDUSTRIAL TREATED WATER PIPE
- TEE/BEND W/ THRUST BLOCKING
- GATE VALVE
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PAULAND Project No.	2013.07.06
M.E. Project No.	P.13555

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CRA	RICK HAGE

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M&S Controls Lead	ANDY BAXTER/ PAGE
*Telecom Lead	NATE ELLIS/ EPARLING
Security Lead	PETE BRETZKE/ ABG

Revisions

No.	Date	Description
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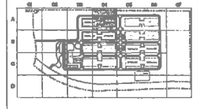
Registration

Key Plan



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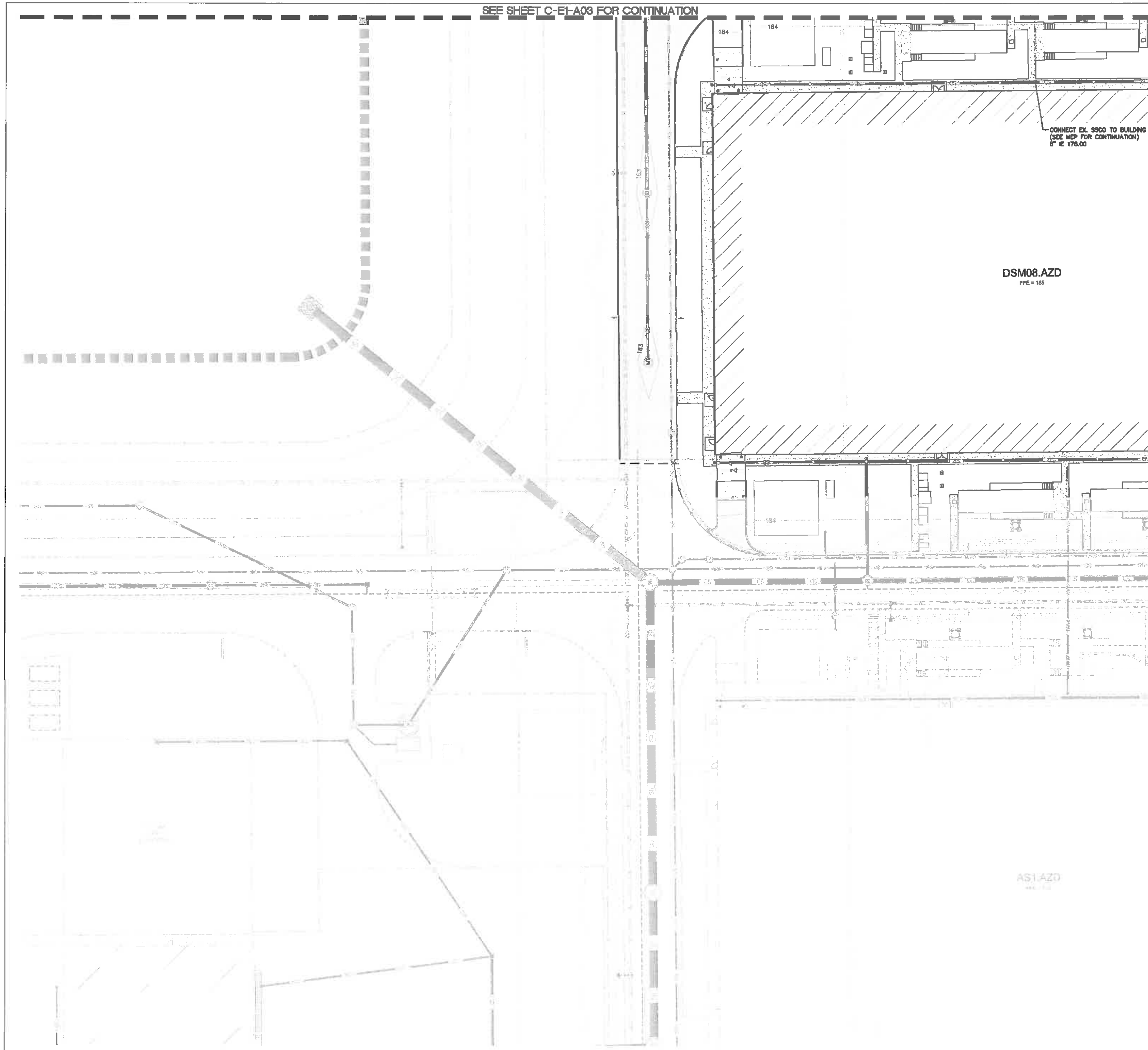
Sheet Title/Number

CIVIL WATER AND SEWER PLAN

C-E1-A04



GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- DOMESTIC WATER PIPE
- INDUSTRIAL TREATED WATER PIPE
- TEE/BEND W/ THRUST BLOCKING (4 / C-F-08)
- GATE VALVE (3 / C-F-07)
- FIRE HYDRANT (3 / C-F-08)
- VERTICAL BENDS (1-5 / C-E1-07)
- EX. SANITARY SEWER PIPE
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- EX. IWW/SANITARY SEWER MANHOLE
- CLEANOUT

FITTING SCHEDULE

1. CONNECT TO FUTURE 16" CITY WATER MAIN
   1-16"x16" TAPPING TEE(FLxMJ)
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   THRUST BLOCKING
6. 1-8"x6" TEE (FLxMJ)
   1-8" PLUG (MJ)
   1-6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
7. 1-16"x6" TEE (FL)
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   1-6" GATE VALVE (FLxMJ)
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8. 1-12" 90° BEND (MJ)
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23. 1-12" MJ CONNECTION (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 3)
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Design Team

Design	L. PALMER / J. AL-KAHTANI
Drawn	J. AL-KAHTANI
Checked	T. DARGAN
Date	18 SEPTEMBER 2014

Approvals

CUSTOMER	MICROSOFT	Date
Microsoft Mechanical Engineer	PETER WANGIA	Date
Microsoft Cable Engineer	ERIC BEAL	
Microsoft Electrical Engineer	STEVE STEINERT	
Engineering Manager	ANDREW TAYLOR	
Security Manager	ERIC YANEZ	
CSA	RICK HAGE	

DESIGN TEAM

CSA Design Lead	JASON GILBERT/PAGE	Date
Architectural Lead	BRYAN HAYWOOD/PAGE	
Civil Engineering Lead	STEVE PESCE/PACLAND	
Structural Engineering Lead	DAVID BROWN/PKB	
Electrical Engineering/EPMS Lead	CAMERON BROWN/PAGE	
Mechanical Engineering Lead	JOHN CURRIE/PAGE	
BAS Controls Lead	ANDY BAXTER/PAGE	
Telecom Lead	NATE ELLIS/SPARLING	
Security Lead	PETE BRETZKE/ASG	

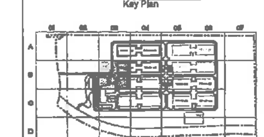
Revisions

No.	Date	Description
1	2016.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANZER
18695
IOWA

Key Plan

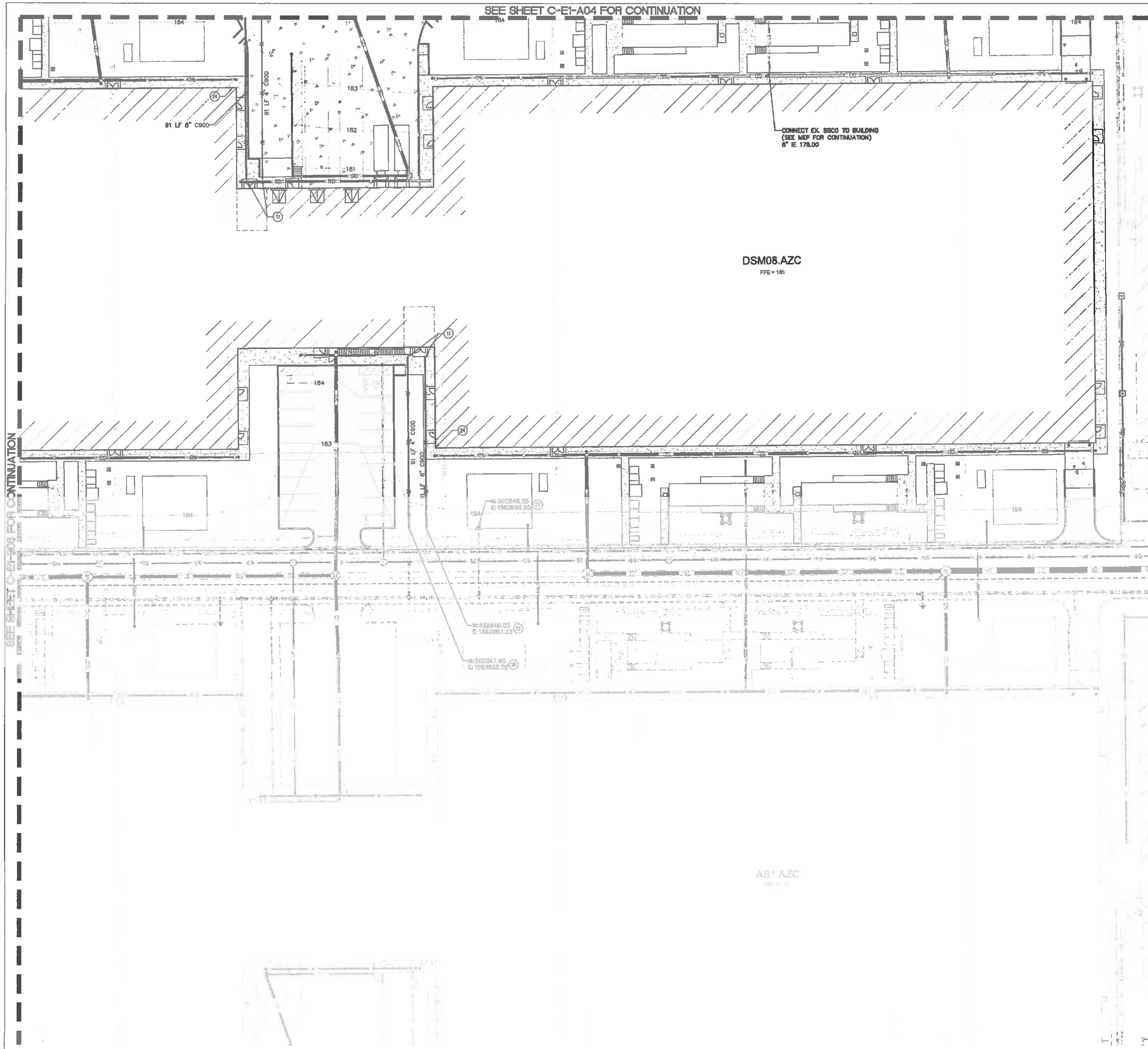


Bar Code

Sheet Title/Number

CIVIL WATER AND SEWER PLAN

C-E1-B03



GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	DOMESTIC WATER PIPE
	INDUSTRIAL TREATED WATER PIPE
	TEE/BEND W/ THRUST BLOCKING (4 / C-F-08)
	GATE VALVE (3 / C-F-07)
	FIRE HYDRANT (3 / C-F-08)
	VERTICAL BENDS (1-5 / C-E1-07)
	EX. SANITARY SEWER PIPE
	EX. INDUSTRIAL WASTE WATER PIPE
	EX. IWW/SANITARY SEWER MANHOLE
	CLEANOUT

FITTING SCHEDULE

1. CONNECT TO FUTURE 16" CITY WATER MAIN
   1-16"x16" TAPPING TEE(FLxMJ)
   1-16" GATE VALVE (FLxMJ)
   THRUST BLOCKING W/ MARKER
2. 1-16"x16" TEE (FL)
   3-16" GATE VALVE (FLxMJ)
   THRUST BLOCKING
3. 1-12"x6" TEE (FLxMJ)
   1-6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
4. 1-FIRE HYDRANT ASSEMBLY
5. 1-16"x8" TEE (FL)
   2-16" GATE VALVE (FLxMJ)
   1-8" ADAPTOR (FLxMJ)
   THRUST BLOCKING
6. 1-8"x6" TEE (FLxMJ)
   1-8" PLUG (MJ)
   1-6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
7. 1-16"x6" TEE (FL)
   2-16" GATE VALVE (FLxMJ)
   1-6" GATE VALVE (FLxMJ)
   THRUST BLOCKING
8. 1-12" 90° BEND (MJ)
   THRUST BLOCKING
9. 1-12"x6" TEE (FL)
   1-12" GATE VALVE (FLxMJ)
   1-6" GATE VALVE (FLxMJ)
   1-12" ADAPTOR (FLxMJ)
   THRUST BLOCKING
10. 1-12"x4" TEE (FLxMJ)
    1-4" GATE VALVE (FLxMJ)
    THRUST BLOCKING
11. CONNECT TO BUILDING (SEE MEP FOR CONTINUATION)
12. 1-12"x8" TEE (FL)
    2-12" GATE VALVE (FLxMJ)
    1-8" ADAPTOR (FLxMJ)
    THRUST BLOCKING
13. 1-16" PLUG (MJ) W/ MARKER
    & BLOW-OFF ASSEMBLY
    THRUST BLOCKING
    (STUB FOR PHASES)
14. 1-16"x16" CROSS (FL)
    4-16" GATE VALVE (FLxMJ)
    THRUST BLOCKING
15. 1-16"x2.5" SERVICE SADDLE
16. 1-2.5" GATE VALVE (RSGV)
    1-2.5" CAP W/ MARKER
17. 1-16"x4" TEE (FL)
    1-16"x2.5" SERVICE SADDLE
    2-16" GATE VALVE (FLxMJ)
    1-4" GATE VALVE (FLxMJ)
    1-2.5" GATE VALVE (RSGV)
    THRUST BLOCKING
18. 1-4" 90° BEND (MJ)
    THRUST BLOCKING
19. 1-12"x4" TEE (FL)
    1-12" GATE VALVE (FLxMJ)
    1-4" GATE VALVE (FLxMJ)
    1-12" ADAPTOR (FLxMJ)
    THRUST BLOCKING
20. 1-4" PLUG (MJ) W/ MARKER
    THRUST BLOCKING
21. 1-8" PLUG (MJ) W/ MARKER
    THRUST BLOCKING
22. 1-6" PLUG (MJ) W/ MARKER
    THRUST BLOCKING
23. 1-12" MJ CONNECTION
    (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 3)
24. WALL MOUNTED FIRE DEPARTMENT CONNECTION
    (SEE MEP FOR SERVICE INFORMATION)
25. 1-8" MJ CONNECTION
    (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 3)
26. 1-2" DOMESTIC WATER METER
    W/ THERMAL COIL METER 1-2
    RPBA W/ HOT BOX
27. 1-FIRE HYDRANT ASSEMBLY
    (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 3)
28. 1-4" MJ CONNECTION
    (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 3)
29. 1-12"x16" REDUCER (MJxMJ)
    (REMOVE PLUG/THRUST BLOCKING AND CONNECT TO EXISTING FROM PHASE 1)
30. 1-4" 45° BEND (MJ)
    THRUST BLOCKING
31. 1-8" 45° BEND (MJ)
    THRUST BLOCKING

Know what's below. Call before you dig.

CITY OF WEST DES MOINES
APPROVED BY: DATE:

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PACLAND

Microsoft

DSM 08 DATA CENTER

550 SE WHITE CRANE ROAD
WEST DES MOINES,IA 50265

Design Team

Design	L. PALMER / J. AL-KAHTANI
Drawn	J. AL-KAHTANI
Checked	T. DARGAN
Date	19 SEPTEMBER 2014
PACLAND Project No.	
M.S. Project No.	P.12000

Approvals

CUSTOMER		Date
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Microsoft Mechanical Engineer	PETER WANEJA	Date
	ERIC BEAL	
Microsoft Electrical Engineer	STEVE STEINERT	
Engineering Manager	ANDREW TAYLOR	
Security Manager	ERIC YANEZ	
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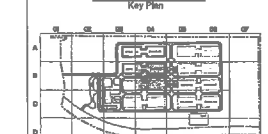
Revisions

No.	Date	Description
1	2015.07.24	100% IFC

Registration

LICENSED PROFESSIONAL ENGINEER
PAUL JEFFREY MANZER
16595
IOWA

Key Plan

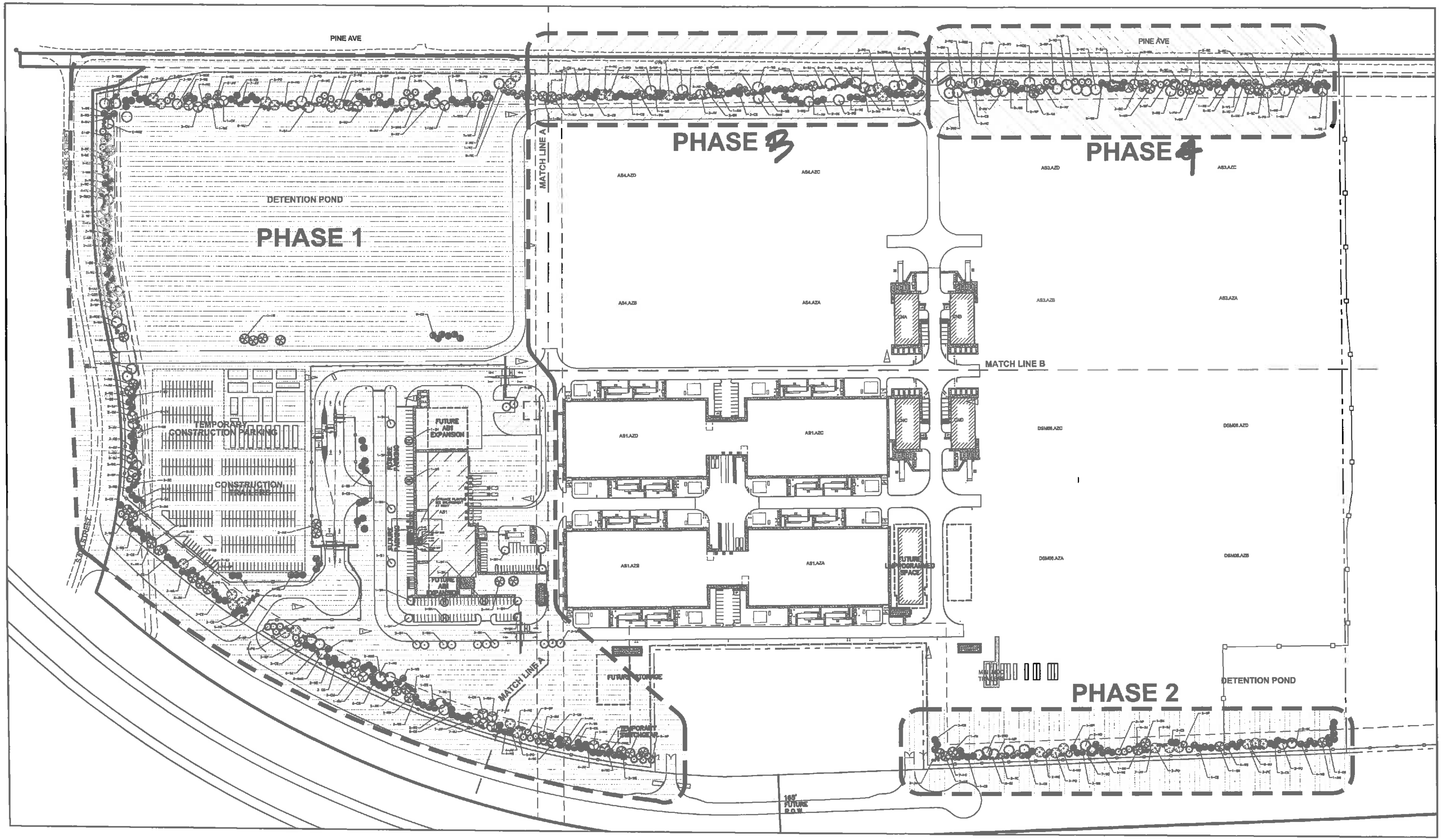


Bar Code

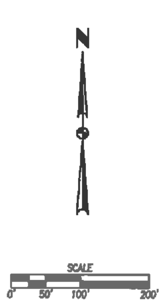
Sheet Title/Number

CIVIL WATER AND SEWER PLAN

C-E1-B04



TREE PLANTING PHASING PLAN
MARCH 12, 2015



PLANT SCHEDULE

CODE	QTY	OVERSTORY TREES		SIZE	COND
AM	37	AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	2" CAL.	B&B
BM	8	BLACK MAPLE	ACER NIGRUM	2" CAL.	B&B
CM	18	CRESCENDO MAPLE	ACER SACCHARINUM 'MORTON'	2" CAL.	B&B
WO	14	WHITE OAK	QUERCUS ALBA	2" CAL.	B&B
RO	10	RED OAK	QUERCUS RUBRUM	2" CAL.	B&B
PO	32	PLATANUS OCCIDENTALIS	EASTERN SYCAMORE	2" CAL.	B&B
SH	28	GLEDITSIA T. INERMIS	SKYLINE HONEYLOCUST	2" CAL.	B&B

CODE	QTY	EVERGREEN TREES		SIZE	COND
CS	116	COLORADO GREEN SPRUCE	PICEA PUNGENS	6' HT.	B&B
WS	120	WHITE SPRUCE	PICEA GLAUCA	6' HT.	B&B
RC	87	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	6' HT.	B&B

CODE	QTY	ORNAMENTAL TREES		SIZE	COND
PF	0	PRAIRIE FIRE CRAB	MALUS X 'PRAIRIE FIRE'	1.5" CAL.	B&B

CODE	QTY	SHRUBS		SIZE	COND
SJ	88	SEA GREEN JUNIPER	JUNIPEROUS CHINENSIS 'SEA GREEN'	18" HT.	CONT
MJ	108	MANEY JUNIPER	JUNIPERUS CHINENSIS 'MANEY'	18" HT.	CONT
BCJ	18	BLUE CHIP JUNIPER	JUNIPERUS H. 'BLUE CHIP'	#5	CONT
JGJ	18	DWARF JAPGARDEN JUNIPER	JUNIPERUS PROCUMBENS 'NANA'	#5	CONT
AV	113	ARROWWOOD VIBURNUM	VIBURNUM DENTATUM 'AUTUMN JAZZ'	18" HT.	CONT
HC	79	HEDGE COTONEASTER	COTONEASTER LUCIDUS	18" HT.	CONT
SC	69	SAMBUCUS C. 'AUREA'	GOLDEN ELDER	18" HT.	CONT
MP	47	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	18" HT.	CONT
CB	8	CRIMSON PYGMY BARBERRY	BERBERIS T. ATROPURPUREA	#5	CONT
GM	8	GOLD MOUND SPIREA	SPIREA X 'GOLDMOUND'	#5	CONT
DL	39	STELLA D'ORO DAYLILLY	HEMEROCALLIS 'STELL D'ORO'	#1	CONT

TREES HARVESTED FROM SITE

CODE	QTY	OVERSTORY TREES		COND
NM	8	NORWAY MAPLE	ACER PLATANOIDES	SPADE
RM	3	RED MAPLE	ACER RUBRUM	SPADE
FM	2	FLAME MAPLE	ACER RUBRUM 'AUTUMN FLAME'	SPADE
SM	2	SUGAR MAPLE	ACER SACCHARUM	SPADE
WO2	4	WHITE OAK	QUERCUS ALBA	SPADE
RO2	14	RED OAK	QUERCUS RUBRUM	SPADE
SWO	22	SWAMP WHITE OAK	QUERCUS BICOLOR	SPADE
HB	2	HACKBERRY	CELTIS OCCIDENTALIS	SPADE
GB	1	GINKGO	GINKGO BILOBA	SPADE

CODE	QTY	EVERGREEN TREES		COND
BS	7	COLORADO BLUE SPRUCE	PICEA PUNGENS GLAUCA	SPADE
RP	2	RED PINE	PICEA GLAUCA	SPADE
WP	61	WHITE PINE	PINUS STROBUS	SPADE

LANDSCAPE TOTALS

TOTAL SITE AREA: =5,109152 S.F. (117.3 AC.)

20% OPEN SPACE REQUIRED: =1,021,830 S.F. (23.5 AC.)

TREES REQUIRED: (2/3000 S.F.) =682
SHRUBS REQUIRED: (3/3000 S.F.) =1,022

PROVIDED:
TREES:
OVERSTORY TREES =211
EVERGREEN TREES =373
TOTAL TREES: =584

SHRUBS =552
PERENNIALS =39

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DSM 05
DATA CENTER
SOUTH 8TH ST. & PINE AVE.
WEST DES MOINES,IA 50265

Design Team
Design
Drawn
Checked
Date 14 MARCH 2014
Page Project No. 114008
M.S. Project No. P.13890

Approvals
CUSTOMER Date
OPERATIONS
Microsoft Mechanical Engineer Date
Microsoft Controls Engineer
Microsoft Electrical Engineer
Engineering Manager
Security Manager
CSA
PROJECT MANAGEMENT
Project Planner Date
Project Manager
Senior Project Manager
Development Manager
Project Manager
Quality Control Reviewer
Quality Control FF&E

Revisions

No.	Date	Description
0	20 JUNE 2014	100% CD IFC
1	29 AUGUST 2014	DRB 02

Registration

Key Plan

N

Bar Code

Sheet Title/Number

LANDSCAPE PLAN

L-A-04

IE AVE

PHASE 4

MATCH LINE A

AS4.AZD

AS4.AZC

AS4.AZB

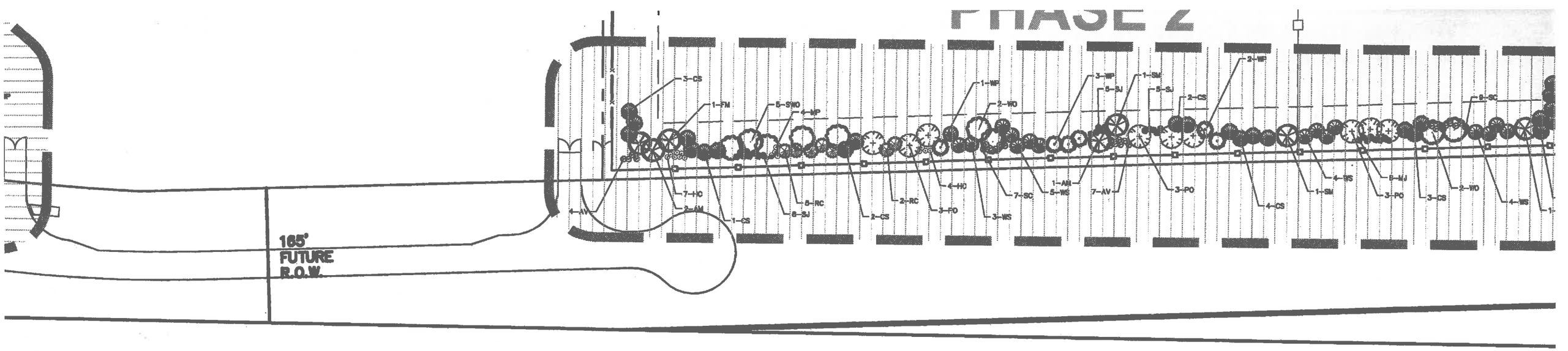
AS4.AZA

CNA

CNB

MATCH

1



PLANT SCHEDULE

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AM	37	AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	2" CAL	B&B
BM	9	BLACK MAPLE	ACER NIGRUM'	2" CAL	B&B
CM	18	CRESCENDO MAPLE	ACER SACCHARINUM 'MORTON'	2" CAL	B&B
WO	14	WHITE OAK	QUERCUS ALBA	2" CAL	B&B
RO	16	RED OAK	QUERCUS RUBRUM	2" CAL	B&B
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CODE	QTY	SHRUBS		SIZE	COND
SJ	99	SEA GREEN JUNIPER	JUNIPEROUS CHINENSIS 'SEA GREEN'	18" HT.	CONT
MJ	108	MANEY JUNIPER	JUNIPEROUS CHINENSIS 'MANEY'	18" HT.	CONT
BCJ	18	BLUE CHIP JUNIPER	JUNIPERUS H. 'BLUE CHIP'	#5	CONT
JGJ	10	DWARF JAPGARDEN JUNIPER	JUNIPERUS PROCUMBENS 'NANA'	#5	CONT
AV	113	ARROWWOOD VIBURNUM	VIBURNUM DENTATUM 'AUTUMN JAZZ'	18" HT.	CONT
HC	79	HEDGE COTONEASTER	COTONEASTER LUCIDUS	18" HT.	CONT
SC	59	SAMBUCUS C. 'AUREA'	GOLDEN ELDER	18" HT.	CONT
MP	47	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	18" HT.	CONT
CB	8	CRIMSON PYGMY BARBERRY	BERBERIS T. ATROPURPUREA	#5	CONT
GM	8	GOLD MOUND SPIREA	SPIREA X 'GOLDMOUND'	#5	CONT
DL	39	STELLA D'ORO DAYLILY	HEMEROCAL;IS 'STELL D'ORO'	#1	CONT

TREES HARVESTED FROM SITE

CODE	QTY	OVERSTORY TREES		COND
NM	6	NORWAY MAPLE	ACER PLATANOIDES	SPADE
RM	3	RED MAPLE	ACER RUBRUM	SPADE
FM	2	FLAME MAPLE	ACER RUBRUM 'AUTUMN FLAME'	SPADE
SM	2	SUGAR MAPLE	ACER SACCHARUM	SPADE
WO2	4	WHITE OAK	QUERCUS ALBA	SPADE
RO2	14	RED OAK	QUERCUS RUBRUM	SPADE
SWO	22	SWAMP WHITE OAK	QUERCUS BICOLOR	SPADE
HB	2	HACKBERRY	CELTIS OCCIDENTALIS	SPADE
GB	1	GINKGO	GINKGO BILOBA	SPADE

CODE	QTY	EVERGREEN TREES		COND
BS	7	COLORADO BLUE SPRUCE	PICEA PUNGENS GLAUCE	SPADE
RP	2	RED PINE	PICEA GLAUCA	SPADE
WP	61	WHITE PINE	PINUS STROBUS	SPADE

LANDSCAPE TOTALS

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20% OPEN SPACE REQUIRED:	=1,021,830 S.F.
TREES REQUIRED: (2/3000 S.F.)	=682
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SHRUBS	=552
PERENNIALS	=39

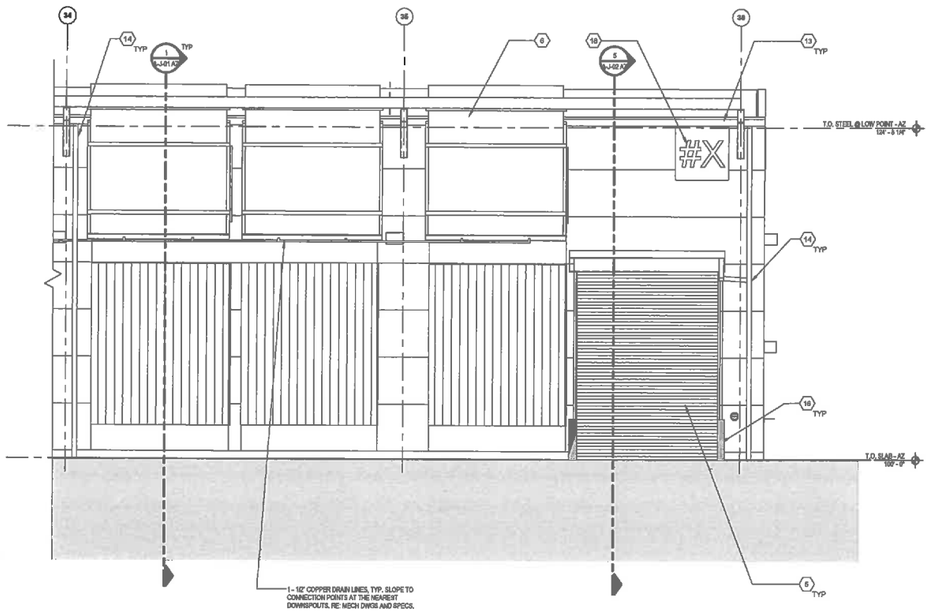
EXHIBIT IV

DSM08 Data Center

West Des Moines, Iowa

Microsoft

Page/



4 TYP. RAD DRAINAGE PIPING ELEVATION
SCALE: 1/4" = 1'-0"

EXTERIOR FINISH LEGEND

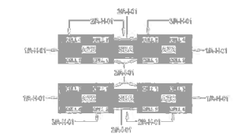
- KINGSPAN METAL PANEL - ASCOTT WHITE
- GLAZING
- LOUVER

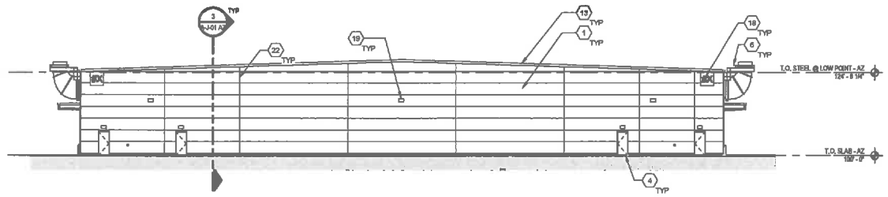
KEYED NOTES - EXTERIOR ELEVATIONS

1 INSULATED METAL PANEL
2 CANOPY
3 ALUMINUM FRAMED STOREFRONT
4 SCHEDULED DOOR (SEE DOOR SCHEDULE)
5 OVERHEAD COILING DOOR (SEE DOOR SCHEDULE)
6 RELIEF DUCT
7 LOUVER
8 MEMBRANE ROOF
9 TRASH COMPACTOR DOOR
10 EXTERIOR FENCING (SEE CIVIL)
11 AIR HANDLING UNIT (SEE MECHANICAL)
12 THRU-WALL SCUPPER WINDOWSPOUT (SEE CIVIL FOR UNDERGROUND TIE-IN)
13 CONTINUOUS RAKE TRIM
14 DOWNSPOUT (SEE CIVIL FOR TIE-IN)
15 BOLLARD; PAINT 'SAFETY YELLOW'
17 KNOX BOX (SEE FIRE PROTECTION DRAWINGS)
18 BUILDING IDENTIFICATION SIGNAGE, SEE SIGNAGE PLANS
19 LIGHT FIXTURE (SEE ELECTRICAL)
20 EXPANSION JOINT
21 CONCRETE FACED INSULATED WALL PANELS
22 METAL PANEL STACK JOINT
23 PENETRATION FOR CABLE BUS (SEE ELECTRICAL)

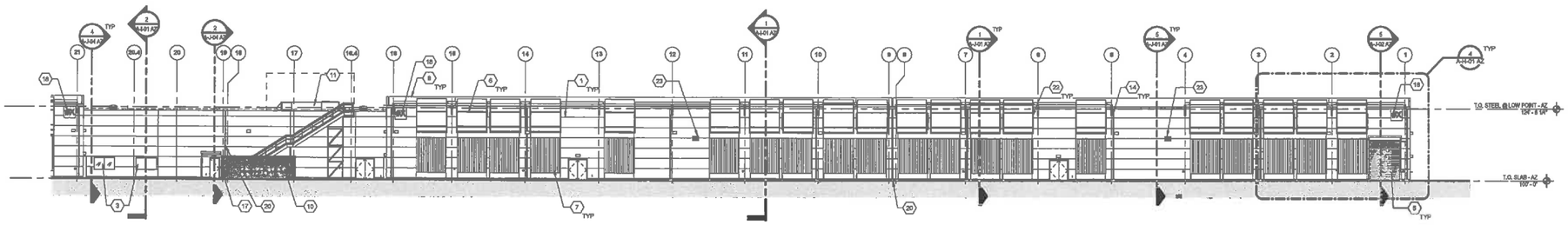
GENERAL NOTES (BUILDING ELEVATIONS)

A. THE KEYED NOTES ARE PART OF A MASTER LIST FOR EXTERIOR ELEVATION DRAWINGS. SOME KEYED NOTES MAY NOT APPEAR ON ALL DRAWINGS.
B. REFER TO DRAWING G-A-03 FOR GENERAL NOTES, SYMBOL, LEGENDS, AND ABBREVIATIONS.
C. REFER TO THE FINISH LEGEND & EXTERIOR FINISH DIAGRAM FOR ADDITIONAL MATERIAL AND COLOR INFORMATION.
D. GENERATORS AND OTHER EQUIPMENT SHOWN IN THE FOREGROUND OF THE BUILDING ELEVATIONS ARE NOT SHOWN FOR CLARITY IN THE ENLARGED ELEVATIONS.
E. REFER TO DETAILS IN THE A-K SERIES DRAWINGS FOR CONDUIT / PIPE WALL PENETRATION DETAILS. NOT ALL PIPE PENETRATIONS ARE SHOWN ON THE ELEVATIONS. REFER TO ELECTRICAL, MECHANICAL, PLUMBING, AND TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
F. FOR ELEVATIONS ALONG GRID LINES 18 AND 21, SEE SIM-A01





1 EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



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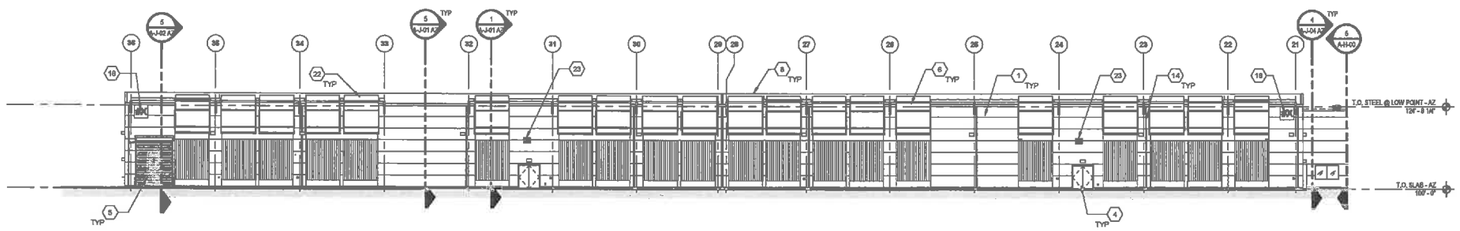
SCALE: 1/16" = 1'-0"



3 EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"

Page/

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Microsoft

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Design Team

Design	BMH
Drawn	MB
Checked	RB
Date	13 JULY 2018
Page Project No.	11609.LIS
M.S. Project No.	P_10293

Approvals

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Microsoft Mechanical Engineer	Date
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Microsoft C-MEP Engineer	
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Microsoft Electrical Engineer	
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Engineering Manager	
ANDREW TAYLOR	
Security Manager	
ERIC YANEZ	
CSA	
RICK HAGE	
DESIGN TEAM	
CSA Design Lead	Date
JASON GILBERT/ PAGE	
Architectural Lead	
BRYAN HAYWOOD/ PAGE	
Civil Engineering Lead	
STEVE PSBOS/ PAGLAND	
Structural Engineering Lead	
DAVID BROWN/ PAG	
Mechanical Engineering (MP&E) Lead	
CAMERON BROWN/ PAGE	
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Telecom Lead	
NATE ELLEM-SPARLING	
Security Lead	
PETE BRETZKE/ ASG	

Revisions

No.	Date	Description
1	2018.07.24	100% IFC

Registration

Key Plan

Bar Code

Sheet Title/Number

EXTERIOR ELEVATIONS

A-H-01 AZ

A-H-01 AZ

EXTERIOR FINISH LEGEND

- KINGSPAN METAL PANEL- ASCOTT WHITE
- GLAZING
- LOUVER

KEYED NOTES - EXTERIOR ELEVATIONS

1 INSULATED METAL PANEL
2 CANOPY
3 ALUMINUM FRAMED STOREFRONT
4 SCHEDULED DOOR (SEE DOOR SCHEDULE)
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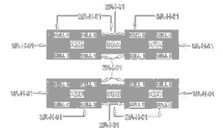
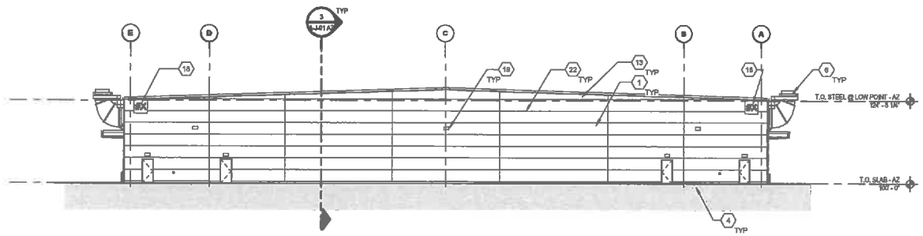
10 EXTERIOR FENCING (SEE CIVIL)
11 AIR HANDLING UNIT (SEE MECHANICAL)
12 THRU-WALL SCUPPER W/DOWNSPOUT (SEE CIVIL FOR UNDERGROUND TIE-IN)
13 CONTINUOUS RAKE TRIM
14 DOWNSPOUT (SEE CIVIL FOR TIE-IN)
15 BOLLARD; PAINT "SAFETY YELLOW"
17 KNOX BOX (SEE FIRE PROTECTION DRAWINGS)
18 BUILDING IDENTIFICATION SIGNAGE, SEE SIGNAGE PLANS
19 LIGHT FIXTURE (SEE ELECTRICAL)
20 EXPANSION JOINT
21 CONCRETE FACED INSULATED WALL PANELS
22 METAL PANEL STACK JOINT
23 PENETRATION FOR CABLE BUS (SEE ELECTRICAL)

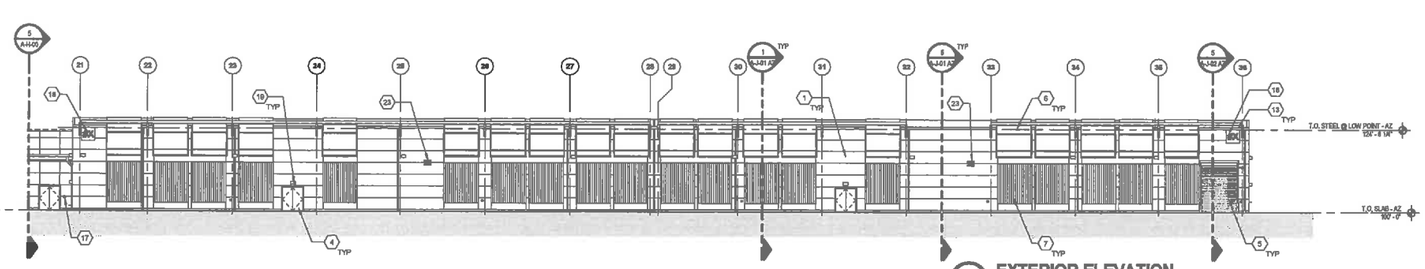
GENERAL NOTES (BUILDING ELEVATIONS)

A. THE KEYED NOTES ARE PART OF A MASTER LIST FOR EXTERIOR ELEVATION DRAWINGS. SOME KEYED NOTES MAY NOT APPEAR ON ALL DRAWINGS.
B. REFER TO DRAWING G-A-03 FOR GENERAL NOTES, SYMBOL LEGENDS, AND ABBREVIATIONS.
C. REFER TO THE FINISH LEGEND & EXTERIOR FINISH DIAGRAM FOR ADDITIONAL MATERIAL AND COLOR INFORMATION.
D. GENERATORS AND OTHER EQUIPMENT SHOWN IN THE FOREGROUND OF THE BUILDING ELEVATIONS ARE NOT SHOWN FOR CLARITY IN THE ENLARGED ELEVATIONS.
E. REFER TO DETAILS IN THE A-K SERIES DRAWINGS FOR CONDUIT / PIPE WALL PENETRATION DETAILS. NOT ALL PIPE PENETRATIONS ARE SHOWN ON THE ELEVATIONS. REFER TO ELECTRICAL, MECHANICAL, PLUMBING, AND TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
F. FOR ELEVATIONS ALONG GRID LINES 18 AND 21, SEE 2/A-I-01

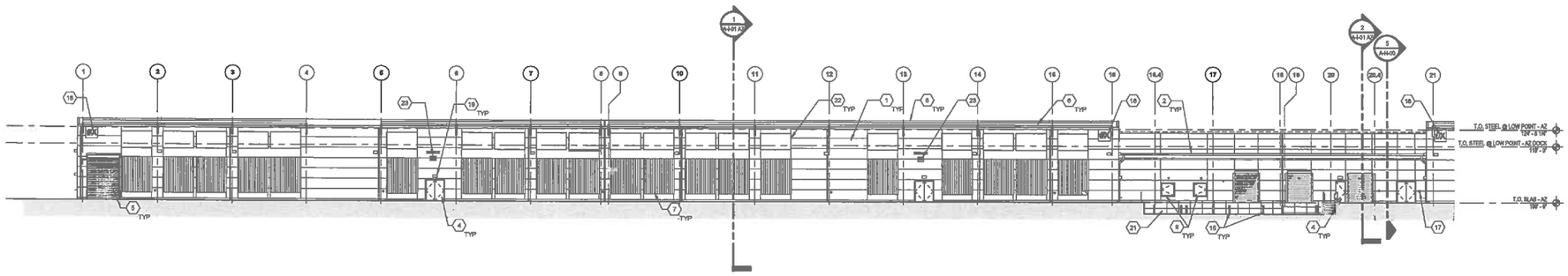




4 EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



2 EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



3 EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"

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No.	Date	Description
1	2018.07.24	100% IFC

Registration

Key Plan

Bar Code

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EXTERIOR ELEVATIONS

A-H-02 AZ

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