

EXTRA SPACE STORAGE FACILITY

1204 SE 16TH COURT
ANKENY, IOWA
ZONED C2



Parking Information

City of Ankeny, Iowa Municipal Code
Chapter 194.01 (E) All storage within completely enclosed
structures. 1 space for every 2 employees on the maximum
shillt but not less than 1 space per 5,000 SF of area devoted to
storage.

Total Parking Required = 23
Regular Parking Stalls = 21
HC Parking Stalls = 2
Total Parking Provided = 23

Occupied Building = 1 Office Worker during Business hours,
115,000 SF of floor space for storage.

Equivalent Residential Unit (ERU) Calculation For Proposed and Future Development

ATI = Total Area of Impervious Surfaces (SQ FT).
= 175,666 SQ FT

1 ERU = 4,000 SQ FT of Impervious Surfaces

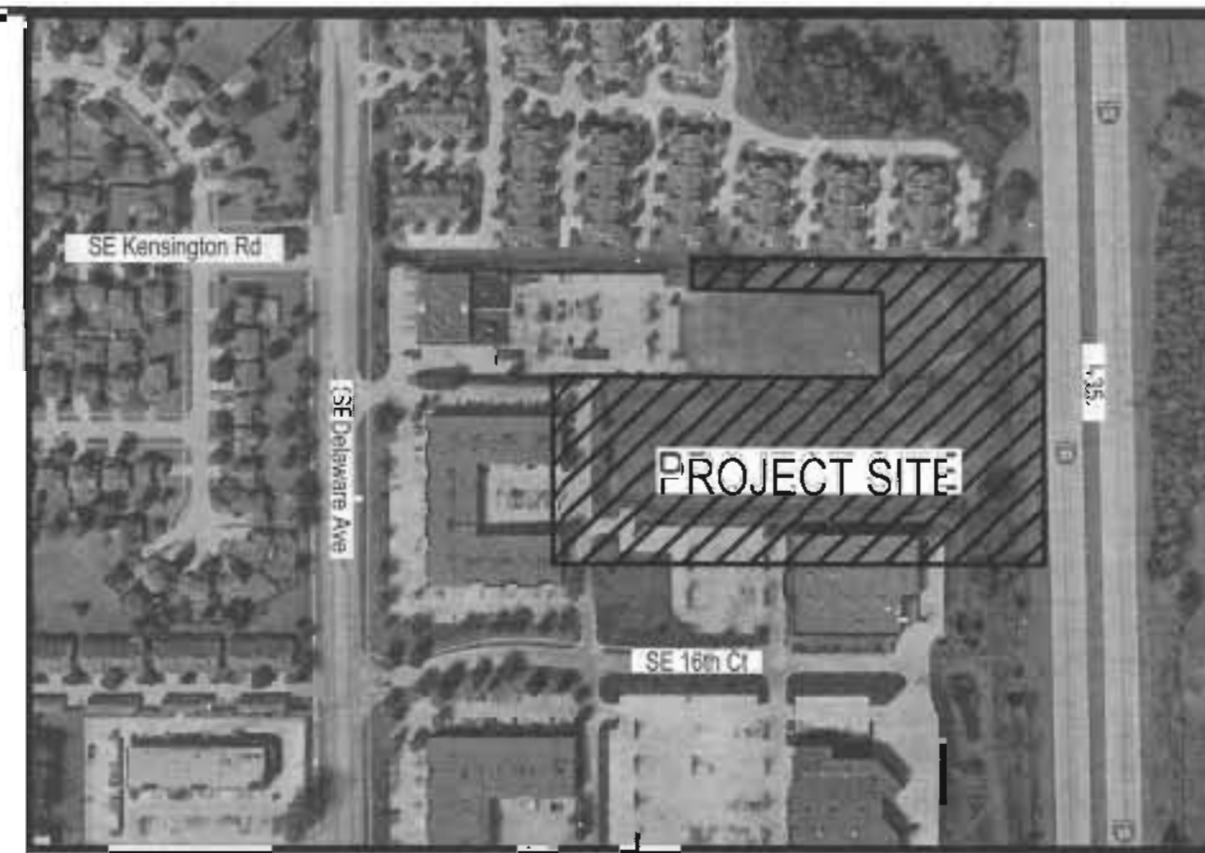
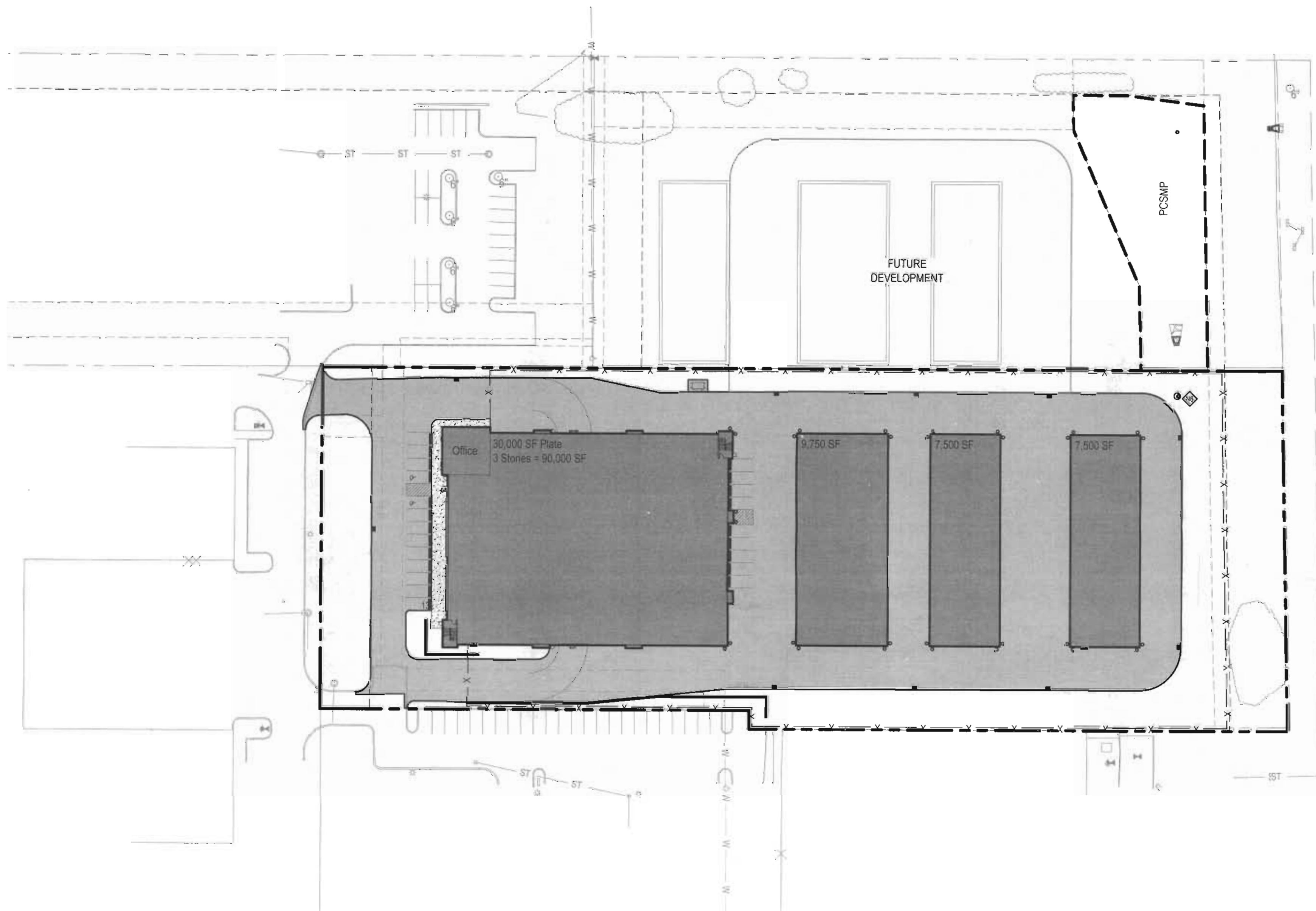
ATI x 1ERU / 4,000 SQ FT =

175,666 SQ FT x 1 ERU / 4,000 SQ FT

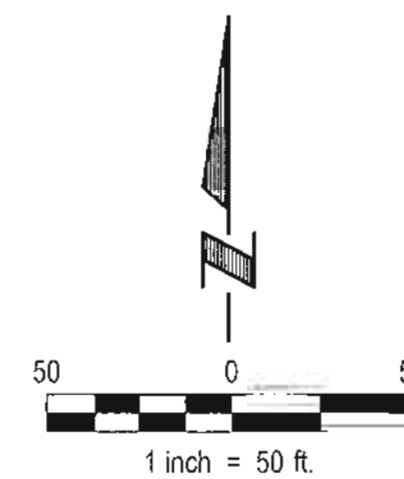
= 43.92 ERU

USE 44.0 ERU

*For proposed and Future Development



VICINITY MAP



Sheet List Table

Sheet Number	Sheet Title
C1.0	COVER
C2.0	SITE LAYOUT & PAVING PLAN
C3.0	GRADING PLAN
C4.0	UTILITY PLAN
C5.0	NOTES & DETAILS
C6.0	STORMWATER POLLUTION PREVENTION PLAN
C6.1	STORMWATER POLLUTION PREVENTION NOTES
C7.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
C8.0	FIRE PLAN
T1.0	TOPOGRAPHIC SURVEY
L1.0	LANDSCAPE PLAN

BENCHMARKS:

BM#1 NORTHWEST RIM BOLT 2ND FIRE HYDRANT NORTH OF
SOUTHEAST 16TH COURT EAST OF SUITE A (1555 S.E.
DELAWARE AVENUE.
EL = 943.39
BM#2 NORTH RIM SANITARY MANHOLE NORTHEAST CORNER OF
SLUMBERLAND FURNITURE, NORTH ENTRANCE.
EL = 939.61
BM#3 NORTHWEST RIM BOLT 1ST FIRE HYDRANT NORTH OF
SOUTHEAST 16TH COURT WEST OF SLUMBERLAND
FURNITURE, NORTH ENTRANCE.
EL = 939.61

LEGAL DESCRIPTION

LOTS 2 AND 3 ANKENY BUSINESS PARK PLAT 5

Architect: Design Associates, Inc.
12550 W. Maple Road
Omaha, NE 68154
Contact: Ken Sorensen
ksorensen@designassoc.com, T: 402-331-8989, F: 402-431-8663

Civil Engineer: E & A Consulting Group, Inc.
10909 Mill Valley Road, Suite 100
Omaha, NE 68154
Contact: David Harnisch, Jr.
dharnisch@eacg.com, T: 402-895-4700, F: 402-895-3599

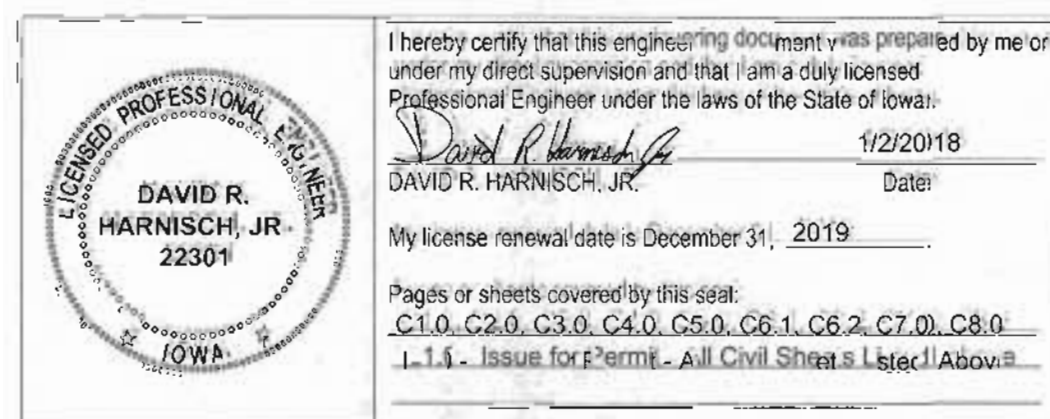
Landscape Engineer: E & A Consulting Group, Inc.
10909 Mill Valley Road, Suite 100
Omaha, NE 68154
Contact: David Harnisch, Jr.
dharnisch@eacg.com, T: 402-895-4700, F: 402-895-3599

Photometrics: Design Associates, Inc.
12550 W. Maple Road
Omaha, NE 68154
Contact: Ken Sorensen
ksorensen@designassoc.com, T: 402-331-8989, F: 402-431-8663

GEO Tech: Terracon
600 SW 7th Street, Suite M
Des Moines, IA 50309
Jeffrey Wagner
jeff.wagner@terracon.com, T: 515-244-3184

Surveyor: E & A Consulting Group, Inc.
10909 Mill Valley Road, Suite 100
Omaha, NE 68154
Contact: Eric Schaben
eschaben@eacg.com, T: 402-895-4700, F: 402-895-3599

Owner/Developer: Heartland Storage Iowa Inc.
17620 Jones Street
Omaha, NE 68118
Contact: Daryl Leise
daryl@heartlandstorage.com
Cell: 402-689-8814



E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eacg.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

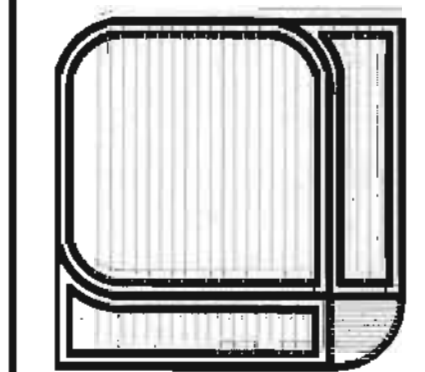
PLANS FOR:
EXTRA SPACE STORAGE FACILITY

1204 S 16TH COURT — ANKENY, IA

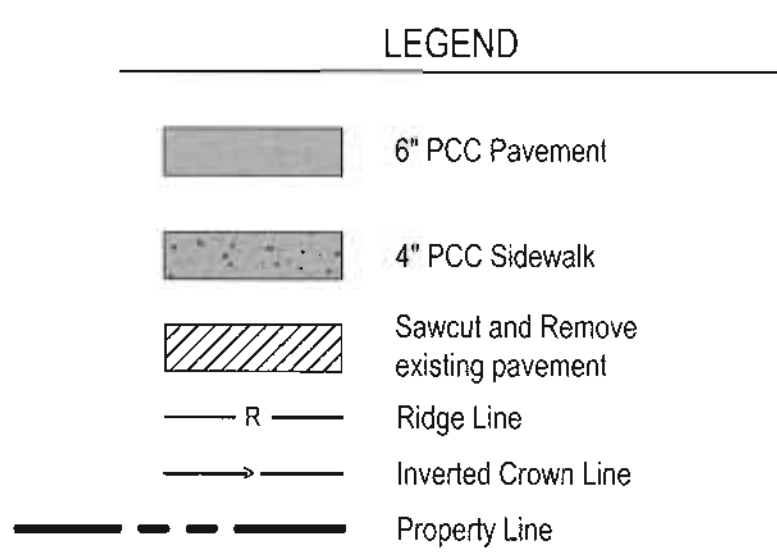
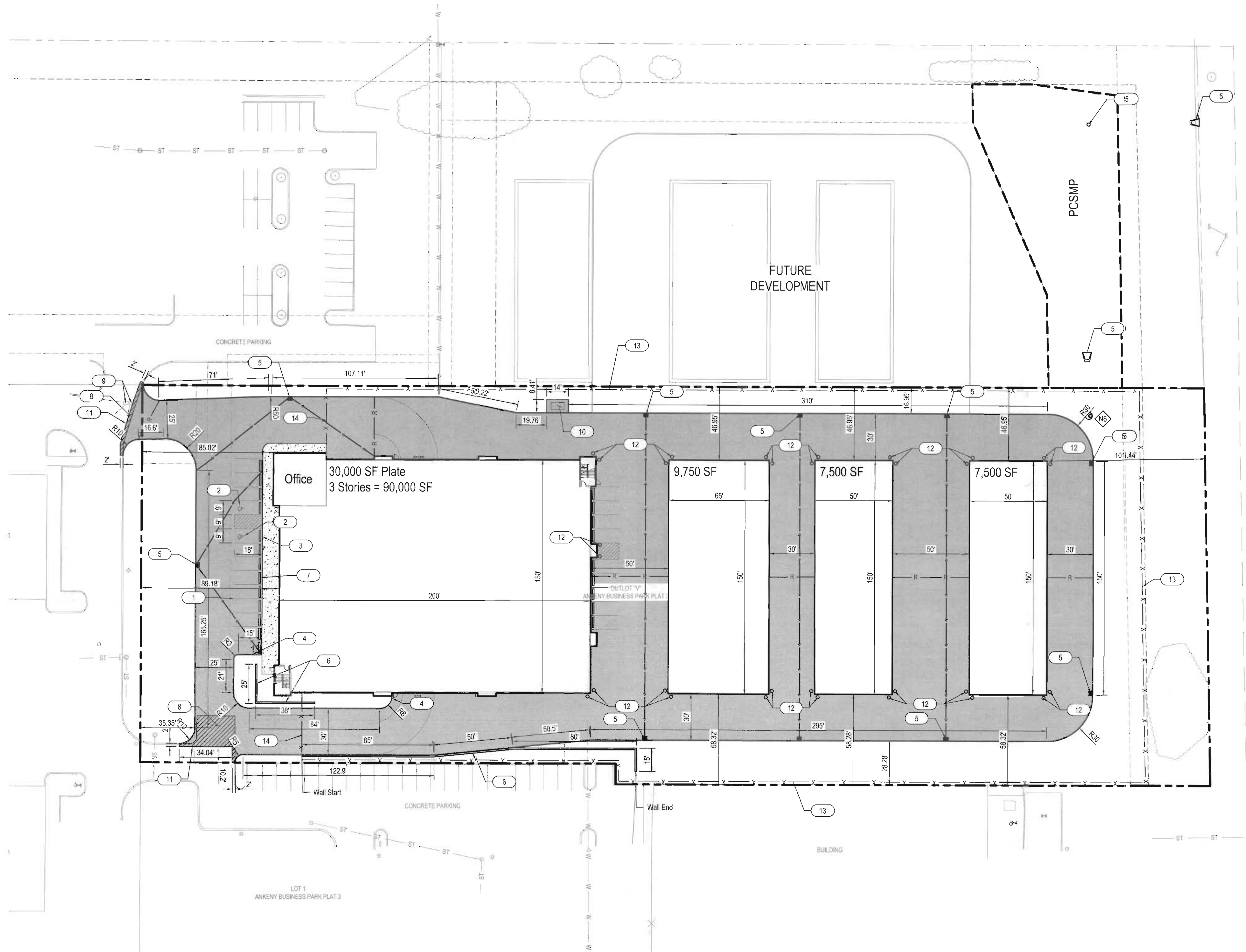
COVER

REVISION	JOB NO.	DATE	DRAWN BY	SHEET NO.
	2016.601	1/3/18	DRH	C1.0

DESIGN ASSOCIATES, INC.
402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68154



C1.0



- BUILD NOTES - LAYOUT**
- 1 Painted parking striping, 4" wide, color: white, typ.
 - 2 Painted handicap symbol, typ. See detail on sheet C5.0
 - 3 Van accessible handicap sign, see detail on sheet C5.0
 - 4 Taper curb from 6" height to 0" height over 5 ft
 - 5 Drainage structure. Refer to sheet C4.0
 - 6 Construct modular block retaining wall.
 - 7 No curb along front sidewalk. Install wheel stops in all parking spots, see detail on sheet C5.0
 - 8 Sawcut and remove existing pavement to proposed pavement line.
 - 9 Existing grate inlets to remain undisturbed and protected
 - 10 Construct dumpster enclosure. See architectural plans for enclosure details
 - 11 Construct tied joint. See 2017 SUDAS 7010.101
 - 12 Construct bollard
 - 13 Construct Belafence, see detail on sheet C5.0
 - 14 Install gate, Contractor to verify make, model, size, and location with owner prior to construction.

- PAVEMENT CONSTRUCTION NOTES**
1. Pavement subgrade shall be prepared and compacted in accordance with Statewide Urban Design and Specifications (2017 SUDAS).
 2. Concrete for the pavement slab shall be low DOT Class C or Class M air-entrained concrete in accordance with the 2017 Statewide Urban Design and Specifications (2017 SUDAS) unless otherwise shown on plans.
 3. All integral curbs shall be 6" Standard Curb in accordance with 2017 SUDAS OCC Curb Details, Figure 7010.102, unless otherwise shown on plans.
 4. Water-reducing admixture shall be added to all hand-placed and finished concrete.
 5. Paving widths shall be as shown on plans. All dimensions shown are back of curb to back of curb.
 6. A diamond edge saw blade shall be used for cutting all required contraction and longitudinal pavement joints.
 7. The CONTRACTOR shall construct with the INSPECTORS assurance of conformity, ADA compliant curb ramps at all intersection returns where new sidewalk is constructed, as well as where existing sidewalk has been removed. Detectable Warnings shall be placed as identified in 2017 SUDAS Detail 7030.210.
 8. Within one (1) hour the concrete pavement shall be cured using a white pigmented liquid membrane-forming curing compound that has been approved by the 2017 State of Iowa Department of Transportation (Iowa DOT). Apply liquid membrane-forming curing compound at the concentration and application rate recommended by the manufacturer.
 9. Subgrade Preparation includes the adjustment of the subgrade under all areas to be surfaced including driveways, intersections, and the area 48 inches beyond the longitudinal edges of the pavement or the backs of curbs for proper placing of the pavement slab. The Contractor shall scarify and recompact the subgrade to a depth of one foot. The top 12" of subgrade as described shall be compacted to 90% maximum dry density as determined in accordance with the most current edition of ASTM D1557 (Modified Method) with moisture limits of -3% to +4% optimum.
 10. All intersections shall be warped as directed by the Engineer in the field to ensure positive drainage.
 11. Thickened Edges are required at locations where proposed paving ties into existing paving.
 12. All pavement removals shall be sawcut. Pavement shall be removed in complete panels. Pavement removal limits may be adjusted in the field to match existing joints.
 13. Furnish and install expansion joint material and sealers to isolate all structures abutting pavement and where otherwise identified on the plans. Iowa DOT article 4136.03.
 14. All Joints shall be sealed. Joint sealant shall be in conformance with Iowa DOT Standards and Specifications, article 4136.02
 15. Contractor Shall provide a pavement jointing plan to Engineer (E&A) for review a minimum of 10 days prior to concrete placement.
 16. Concrete Panels shall not exceed a maximum dimension of 24 times the thickness of the concrete. Panels shall be kept as square as possible. Joints shall be perpendicular to edges and radii and shall not form angles less than 45 degrees over 225 degrees.



E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3559
www.eagroup.com

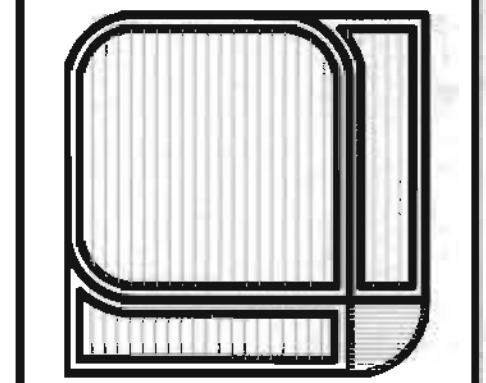
P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

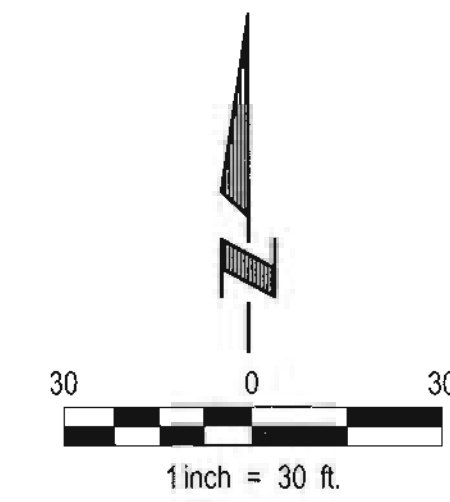
PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT
ANKENY, IA
SITE LAYOUT & PAVING PLAN

REVISION	JOB NO.	DATE	DRAWN BY	SHEET NO.
	2016.601	1/3/18	DRH	C2.0

DESIGN ASSOCIATES, INC.
402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68164



C2.0

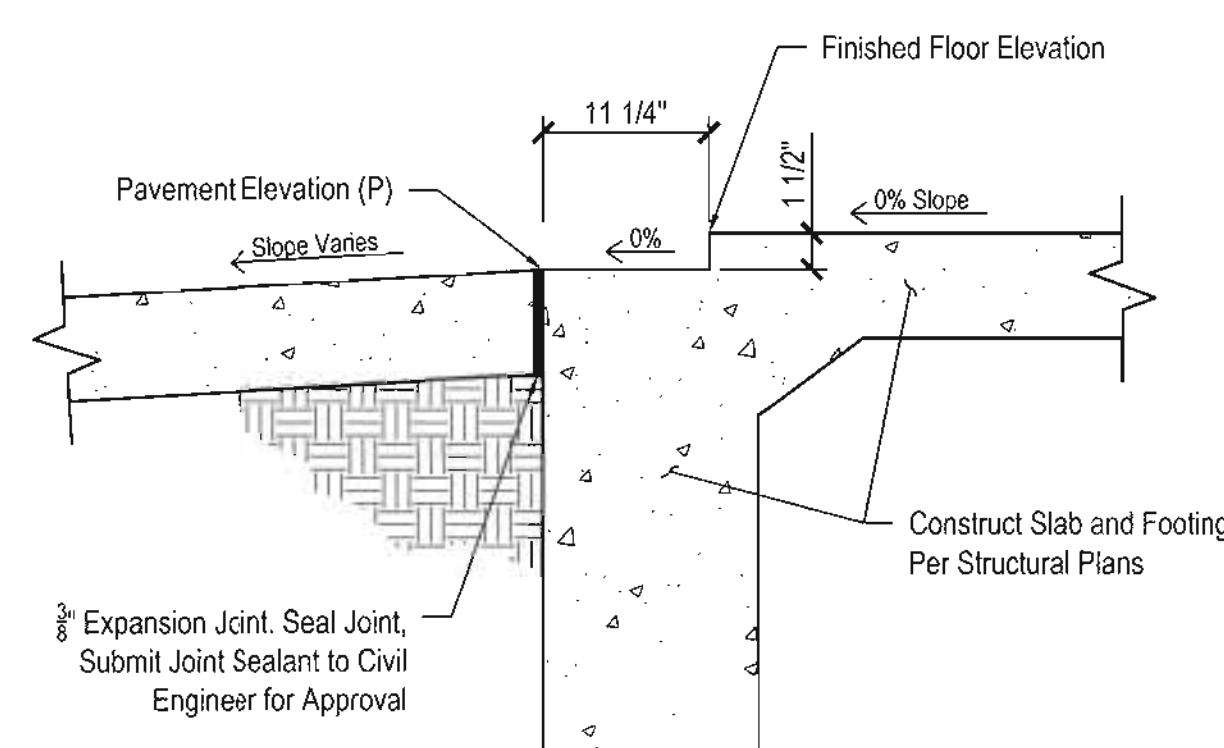


LEGEND

- Existing Contours
- Proposed Contours
- Proposed Flow Line Spot Elevations (Add 6.5' for Top of Curb)
- Proposed Top of Pavement Spot Elevation
- Proposed Top of Wall Spot Elevation
- Proposed Bottom of Wall Spot Elevation
- Building Footprint. See Architectural Plans for Details
- Inverted Crown
- Ridge Line
- Top of Basin / 100 Year Flood Elevation

GENERAL GRADING NOTES

- The Contractor Shall have Complete Responsibility For Damage Caused by Blowing Dust from his Construction Activities.
- Topsoil and Vegetation Shall be Stripped to a Depth of 6" to 96" in Areas to be Graded.
- Topsoil Obtained from Stripping Operations Shall be Stockpiled in an Approved Location and Re-spread on Areas Finish Graded to Receive Topsoil.
- Rubble and Waste Materials from site Clearing and Demolition Shall be Removed From the Site and Lawfully Disposed, Salvaged, or Recycled. Where Fence Posts are Removed, their Concrete Bases Shall be Excavated and Completely Removed. Waste Materials Shall not be Buried on Site.
- All Fill and Backfill Shall be Low Plasticity, Cohesive Soil that are Free of Organic Material or Debris. Structural Fill Materials Shall Have a Liquid Limit Less than 45 and a Plasticity Index Less Than 20. Excavated Site Soils Will Generally be Suitable for Use as Structural Fill.
- Fill Compaction Requirements:
 - Footing Foundations:
 - Areas to Receive Fill Shall be Scarified to a Minimum Depth of 6". Fill Shall be Placed in Lifts Not to Exceed 8" in Loose Thickness. Structural Fill Shall be Compacted to a Minimum of 95% of the Maximum Dry Density (ASTM D-698, Standard Proctor) at a Moisture Content Between -2 and +3% of Optimum.
 - All Other Locations:
 - Areas to Receive Fill Shall be Scarified to a Minimum Depth of 6". Fill Shall be Placed in Lifts Not to Exceed 8" in Loose Thickness. Structural Fill Shall be Compacted to a Minimum of 95% of the Maximum Dry Density (ASTM D-698, Standard Proctor) at a Moisture Content Between -2 and +3% of Optimum.
- PCC Pavements: Prepare Subgrade Below Pavements Prior to Paving Operations by Compacting Upper 9" a Minimum of 98% of the Maximum Dry Density (ASTM D 698 Standard Proctor) at a Moisture Content Between -3 and +4% of Optimum. Subgrade Preparation shall Extend a Minimum of 2 feet Beyond the Back of Curb.
- For Sidewalks, the Upper 6" of Subgrade shall be Compacted to a Minimum of 95% of the Maximum Dry Density (ASTM D-698, Standard Proctor) at a Moisture Content Between -3 and +4% of Optimum. Sidewalk Subgrades Shall Extend at Least 6" Laterally Beyond the Edge of the New Sidewalk.
- Backfill Soils Around Foundations, Basement Walls and Retaining Walls shall be Compacted to a Minimum of 95% of the Maximum Dry Density (ASTM D-698, Standard Proctor) at a Moisture Content Between -2% and +3% of Optimum. Granular Backfill shall Not be used Around Foundation Elements.
- Backfill Soils in Utility Trenches shall be Compacted to a Minimum of 85% of the Maximum Dry Density at a Moisture Content Between -2% and +3% of Optimum (ASTM D698, Standard Proctor). Lift Thickness Shall be Appropriately Matched to the Equipment Used. Granular Backfill shall not be Used in Exterior Trenches. Backfill Placed Within a Zone of Subgrade Preparation Shall be Compacted to the Requirements of the Subgrade for the full Depth of the Backfill.
- Imported Material, if Required, shall be Free of Organic Matter and Debris, and shall be a Clean, Inorganic Silt or Lean Clay with a Liquid Limit Less than 45 and a Plasticity Index Less than 20. Borrow Material shall not Contain any Foreign Material with a Dimension Greater than 3".
- Any Excess Material shall be Disposed of Off-Site at a Location Determined by the Contractor.
- Unless Noted, all Spot Elevations Shown are Top of Curb (TC), Top of Slab (P) or Gutter/Flow Line (GFL). **CONTRACTOR SHALL BE RESPONSIBLE FOR ACCOUNTING FOR PAVEMENT THICKNESS WHEN GRADING.**
- The Subgrade of the Floor Slab Shall be Reworked and Compacted as Structural Fill Prior to Concrete Placement. Upper 8 inches Shall be Compacted to a Minimum of 95% of the Maximum Dry Density as a Moisture Content Between -2% and +3% of Optimum (ASTM D698, Standard Proctor).
- If Unstable Soils Are Encountered In The Bottom of Shallow Foundations or Subgrade Areas Implement Over Excavation and Structural Backfill.
- Exposed Project Site Soils Shall be Stabilized as Shown in the Sediment and Erosion Control Plan and Landscaping Plan. **ALL DISTURBED AREAS THAT ARE TO BE LANDSCAPED OR SODDED SHALL BE CONDITIONED TO ENSURE GOOD MOISTURE INFILTRATION.**
- The Recommendations of the Geotechnical Report shall control in all instances where subgrade preparation, backfill and compaction are concerned. See Terracon Project No. 05175019.



FOUNDATION ELEVATION DETAIL
NOT TO SCALE



E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

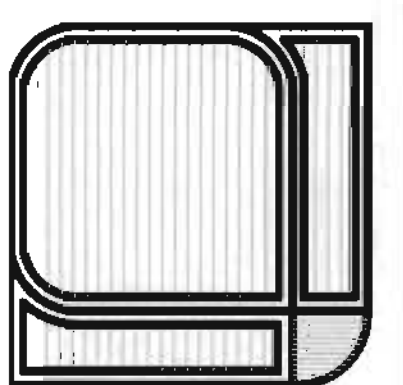
10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eacg.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

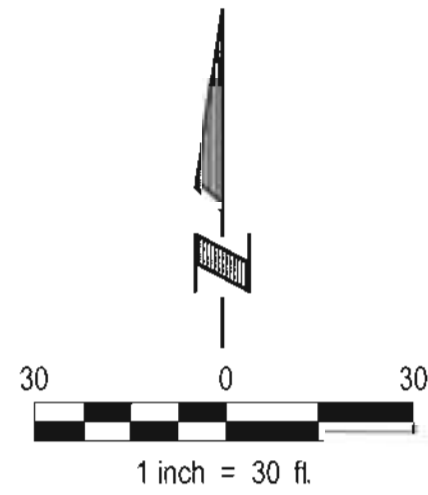
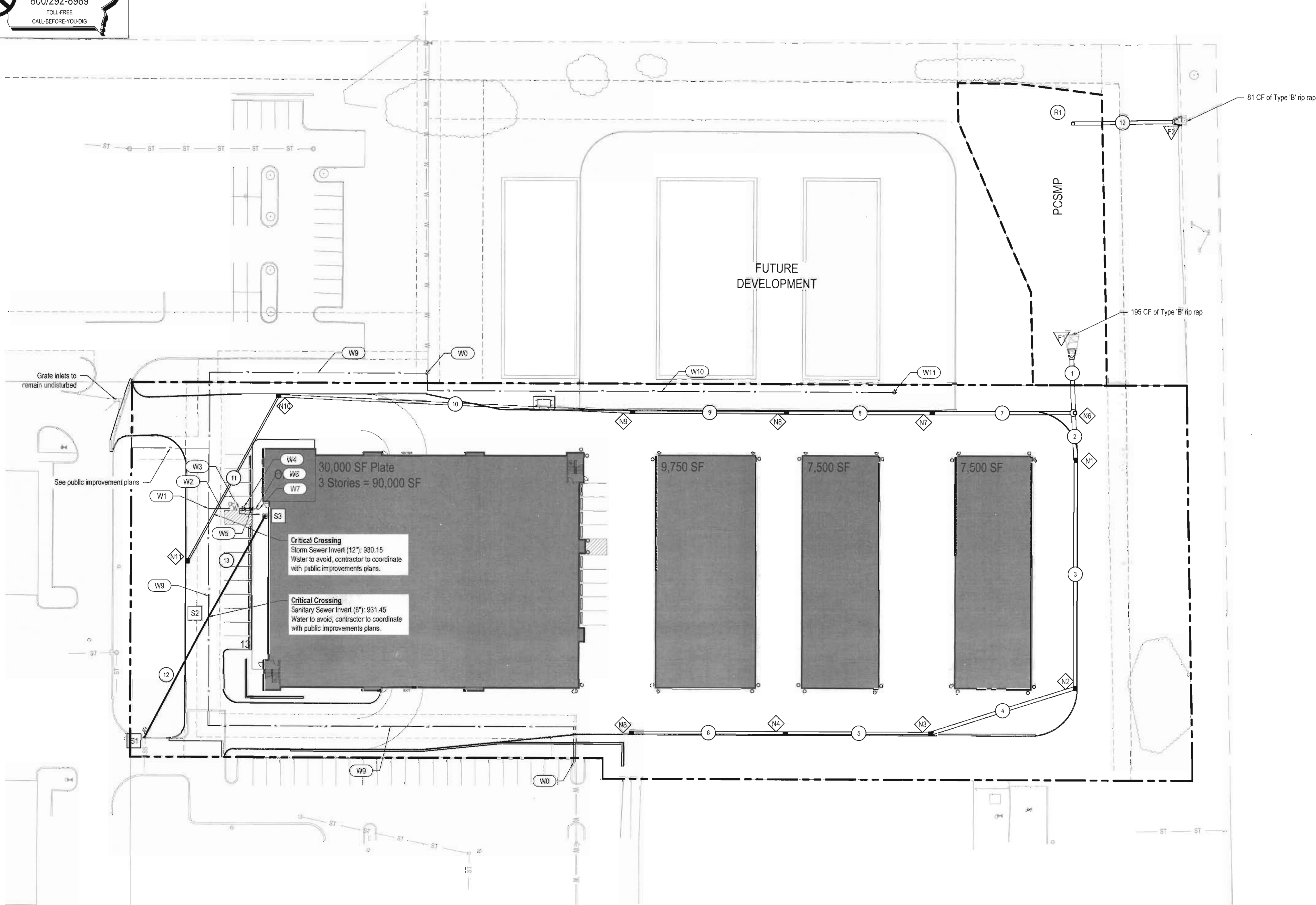
PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT — ANKENY, IA
GRADING PLAN

DESIGN
ASSOCIATES,
INC. 402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68164



C3.0

\\ns01\proj\2016\1204 S 16TH COURT.dwg 1/13/2018 12:34 AM



LEGEND	
	Storm Sewer Pipe Network
	Sanitary Sewer Pipe Network
	PCSMP Basin Perimeter

CONSTRUCT STORM STRUCTURE	
NO.	DESCRIPTION
F1	30" Flared End Section FL (30" In) = 915.50 See Riprap Apron outlet protection detail on Sheet C7.0 (PCSMP sheet)
F2	18" Flared End Section FL (18" In) = 914.99 See Riprap Apron outlet protection detail on Sheet C7.0 (PCSMP sheet)
N1	Hydro International First Defense FD_8HC w/ Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 925.74 FL (24" In) = 917.78 FL (30" Out) = 917.78
N2	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 925.74 FL (18" In) = 920.86 FL (24" Out) = 920.86
N3	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 926.71 FL (18" In) = 922.82 FL (18" Out) = 922.82
N4	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 928.22 FL (18" Out) = 924.72 FL (15" In) = 924.72
N5	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 929.22 FL (15" Out) = 925.72
N6	Storm Sewer Manhole Rim = 924.61 FL (24" In) = 916.26 FL (30" Out) = 916.26 FL (30" In) = 916.26
N7	Hydro International First Defense FD_8HC w/ Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 926.55 FL (24" Out) = 919.70 FL (24" In) = 919.70
N8	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 928.36 FL (24" Out) = 921.60 FL (18" In) = 921.60
N9	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 929.22 FL (18" Out) = 923.60 FL (18" In) = 923.60
N10	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 935.56 FL (18" Out) = 928.40 FL (12" In) = 928.40
N11	Nyloplast 2' x 3' Road & Highway Grate Inlet Rim = 935.40 FL (12" Out) = 930.84
R1	Riser Structure Rim = 920.50 FL (18" Out) = 915.50 See riser detail on sheet C7 Add 2' jump to riser structure

*See Gate Inlet Capacity Chart Sheet C5.0

GENERAL WATER NOTES:

- The work shall be constructed in accordance with the 2017 Edition of the Statewide Urban Design and Specifications (2017 SUDAS).
- Water mains and service lines shall have a minimum cover of 5.5 feet.
- The horizontal distance between the sewer and water lines shall be 10 feet min. and the vertical distance shall be two feet min. the sanitary sewer shall be D.I.P. 10 feet each side of the water main when the vertical distance is less than 2 feet.
- Contractor shall maintain all valves at connection points in the fully closed position until chlorination testing and approval of proposed water lines are complete, except that said valves may be opened to fill lines for use in the chlorination process.
- Type "K" copper water service of the sizes and quantities shown, shall be constructed to all buildings shown of this development in accordance with the specifications and details shown on the plans. the contractor shall record tap and valve locations of each water service installed and provide such records to the owner upon completion of construction.
- Contractor shall field verify all potential utility line crossing conflicts. contractor shall notify engineer of conflicts and adjust horizontal and vertical alignments of proposed utilities only at the direction of the engineer.

WATER REFERENCE NOTES

W 0	Connect proposed water main to existing water main.
W 1	Tap Existing (Going in as Public Improvements) Water Main with 6" Tapping Sleeve and Valve. Coordinate Tap with Local Utility.
W 2	Construct 37 LF of 6" Water Service Line in Accordance with Local Utility Specifications.
W 3	Furnish and install 6"x6"x6" Water Tee.
W 4	Install 6" to 1" Water Reducer
W 5	Furnish and Install 1" Curb Stop Valve
W 6	Construct 13 LF of 1" Water Service Line in Accordance with Local Utility Specifications.
W 7	See Mechanical/ Plumbing Plans for Continuation.
W 8	Construct 28 LF of 6" Water Service Line in Accordance with Local Utility Specifications.
W 9	Construct 630 LF of 6" Water Main in Accordance with Local Utility Specifications.
W 10	Construct 315 LF of 6" Private Water Service Line in Accordance with Local Utility Specifications.
W 11	Furnish and Install Fire Hydrant in Accordance with Local Utility Specifications.

CONSTRUCT STORM PIPE						
ID	START STRUCTURE	END STRUCTURE	Dis.	Length	Slope	Remarks
1	N6	F1	30"	34.79	2.17%	
2	N1	N6	30"	30.53	5.00%	
3	N2	N1	28"	147.31	2.09%	
4	N3	N2	18"	98.03	2.00%	
5	N4	N3	18"	95.00	2.00%	
6	N4	N5	15"	100.00	1.00%	
7	N6	N7	24"	91.60	3.78%	
8	N7	N8	24"	95.01	2.00%	
9	N8	N9	18"	90.99	2.00%	
10	N9	N10	18"	228.83	2.10%	
11	N10	N11	12"	121.98	2.00%	
12	R1	F2	18"	65.00	0.78%	

CONSTRUCT SANITARY STRUCTURE	
NO.	DESCRIPTION
S1	Tap Existing Sanitary Pipe with Manufactured Wye (Field Verify Elevations) Rim = 939.39 FL (6" In) = 930.75
S2	Cleanout Rim = 936.19 FL (6" Out) = 931.38 FL (6" In) = 931.42
S3	Double Cleanout Rim = 936.23 FL (6" Out) = 932.01

See MEP plans for double cleanout detail and for continuation to building.

CONSTRUCT SANITARY PIPE					
ID	Material	Size	Length	Slope	Remarks
12	HDPE Pipe	6"	83.72	0.75%	Install shallow pipe and required insulation per 2017 SUDAS. Contractor to coordinate sanitary design and MEP ejector pump design prior to construction.
13	HDPE Pipe	6"	78.41	0.75%	



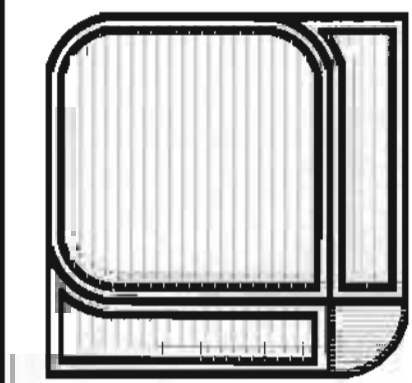
E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10009 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eacg.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

DESIGN ASSOCIATES, INC.
402/331-8899
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68164



C4.0

PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT — ANKENY, IA
UTILITY PLAN

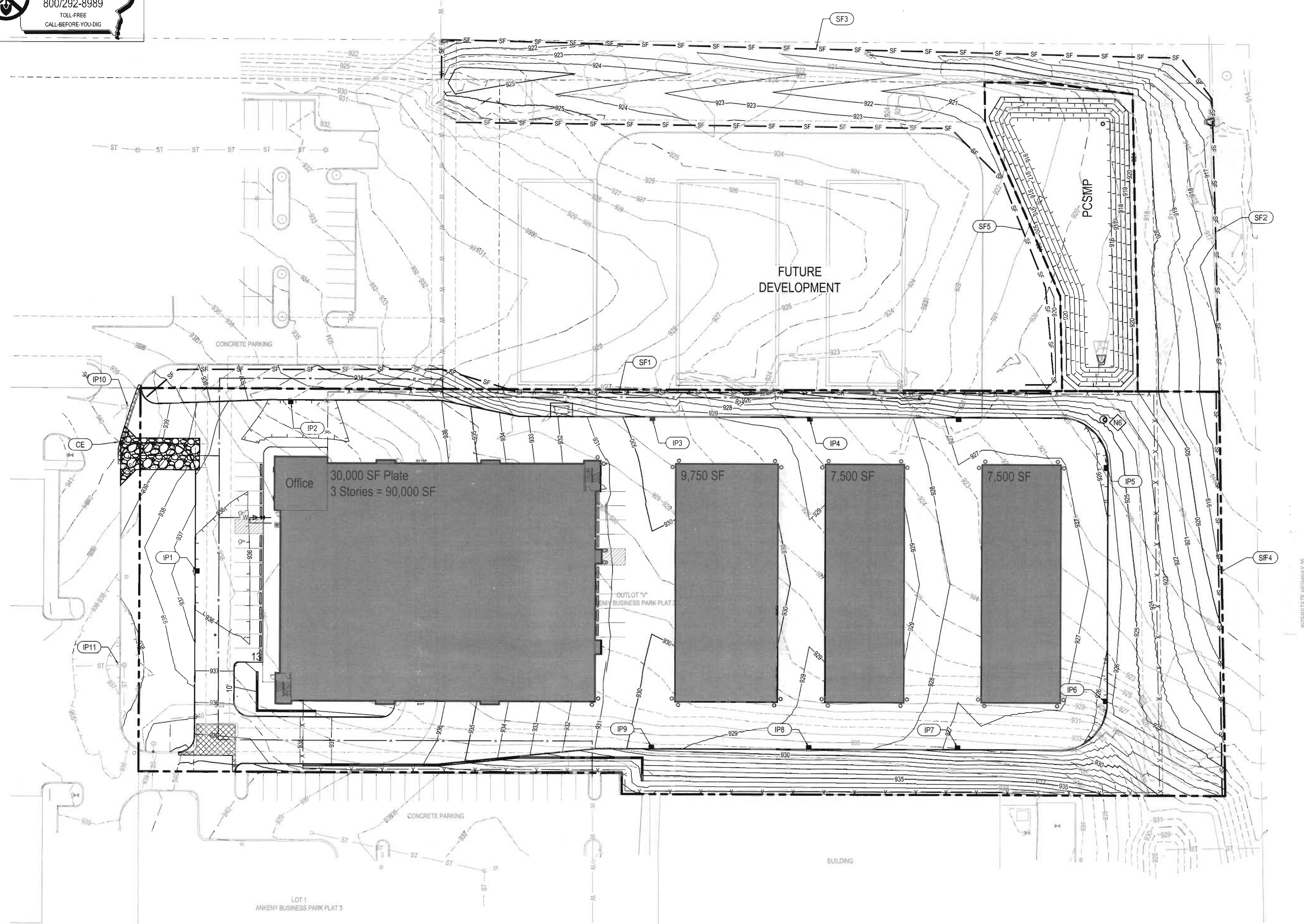
REVISION

JOB NO. 2016-601

DATE 1/3/18

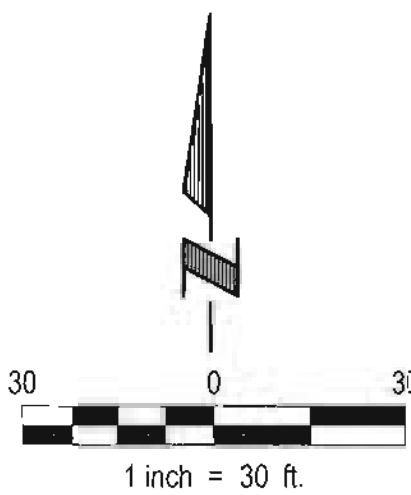
DRAWN BY: DRH

SHEET NO. C4.0



VICINITY MAP

Owner/Developer:
Heartland Storage Iowa Inc.
17620 Jones Street
Omaha, NE 68118
Contact: Daryl Leise
daryl@heartland.com
Cell: 402-889-6814



LEGEND

•	Power Pole
—	Guy Wire
•	Light Pole
•	Fire Hydrant
•	Utility Valve (Water)
•	Curb Inlet
•	Manhole
— X — X —	Fence Line
— G — G —	Gas Line
— W — W —	Water Line
— CHP — CHP —	Power Line (Overhead)
— SF —	Silt Fence
— 1120 —	Existing Contours
— 1170 —	Proposed Contours
— — —	PCSMP Basin Perimeter
— — —	Property Line

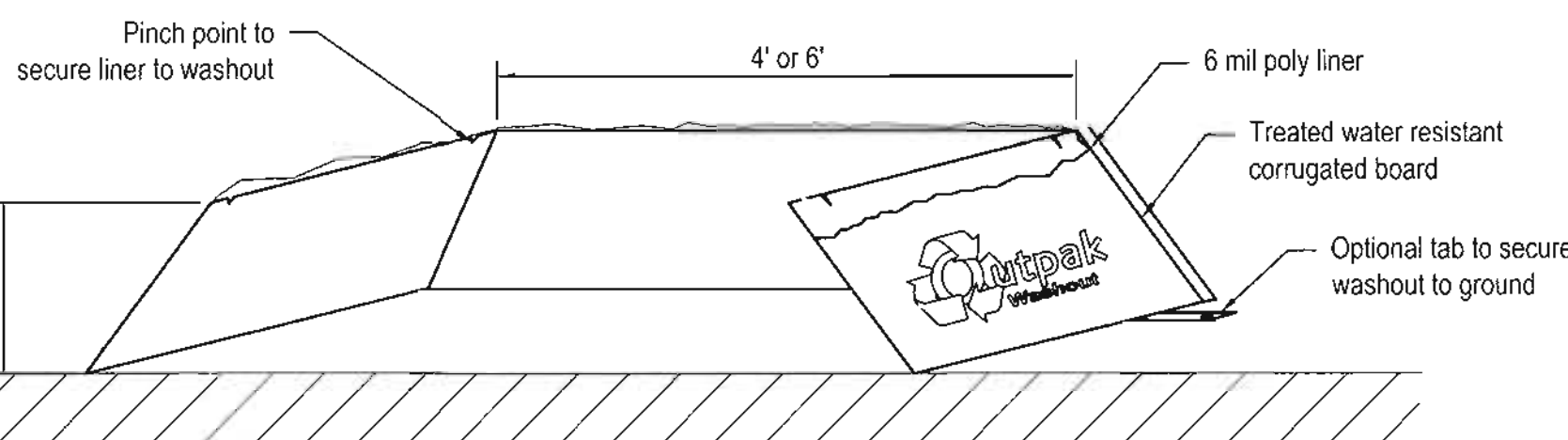
NOTE:
Refer to Landscaping Plan for final site stabilization measures.

Refer to Storm Water Pollution Prevention (SWPPP) Notes on Sheet 6.1

No. SEDIMENT & EROSION CONTROL REFERENCE NOTES

- CW1 Furnish and Install Concrete Washout Area. Use Outpack Washout or Engineer Approved Equal. See Detail on This Sheet. Location to vary as paving progresses.
- CE1 Construction Entrance, SUDAS 9040.120
- SF1 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF2 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF3 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF4 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF5 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- IP1 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP2 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP3 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP4 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP5 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP6 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP7 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP8 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP9 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP10 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- IP11 Furnish and Install Inlet Protection." SUDAS Design Manual, 7E-20
- *Install Area Inlet Protection on Additional Inlets as Necessary.

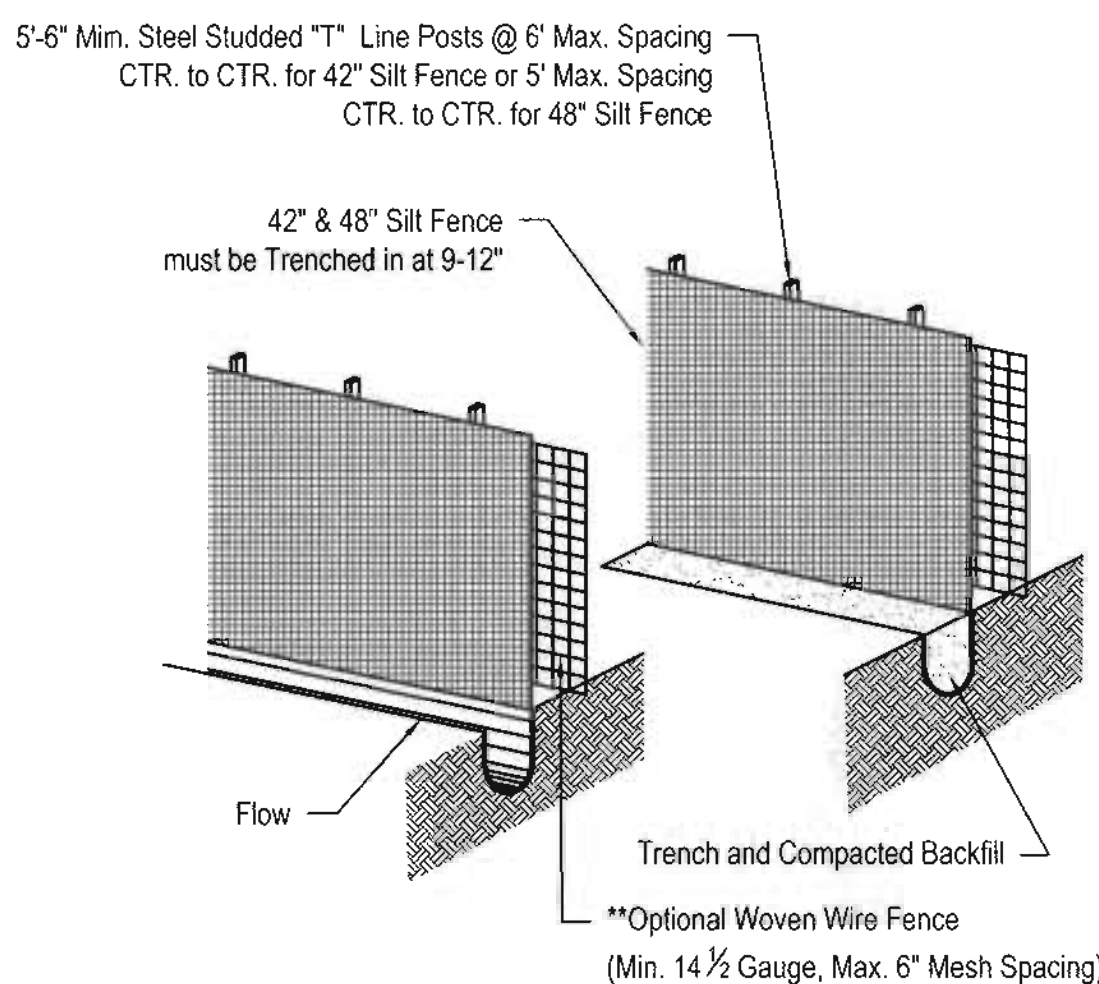
CONCRETE
WASHOUT



NOTES:

- The concrete washout area shall be installed prior to any concrete placement on this project. Install washout area on a level surface. Use Outpack Disposable Concrete Washout or approved equal.
- Signs shall be placed as necessary to clearly indicate the location of the concrete washout.
- The concrete washout area will be replaced as necessary to maintain capacity for waste concrete and other liquid waste.
- Washout residue shall be removed from the site and disposed of at an approved waste site.
- Do not mix excess amounts of fresh concrete or cement on-site.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not dump excess concrete in non-designated dumping areas.
- Locate washout area at least 50' (15 meters) from storm drains, open ditches, or waterbodies.
- Wash out wastes into the Outpack Washout as shown where the concrete can set, be broken up, and then disposed of properly.

CONCRETE WASHOUT
NOT TO SCALE



SILT FENCE
NOT TO SCALE

NOTES

- Acceptable silt fence specifications- AOS (#20 - 50 Sieve), Water Flow Rate (50 gpm/sq. ft. - 125 gpm/sq. ft), Tensile Strength (Grab) - (Min. 120 Warp or greater and Elongation (5-25%).
- On each new run of silt fence spray paint the beginning of the run with 0+00 and spray paint the end with the date of installation and LF of the run.
- Silt fence should be securely fastened to each steel support post or to woven wire which is in turn attached to the steel fence posts. A minimum of 3 ties are required for each post. To be located in the top 12\"/>



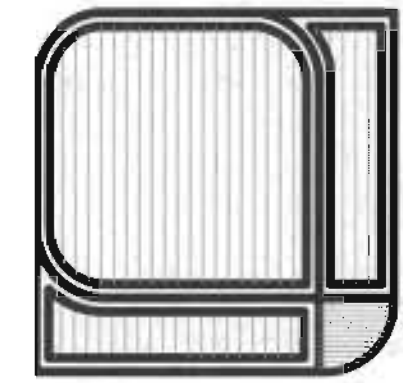
E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eaog.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

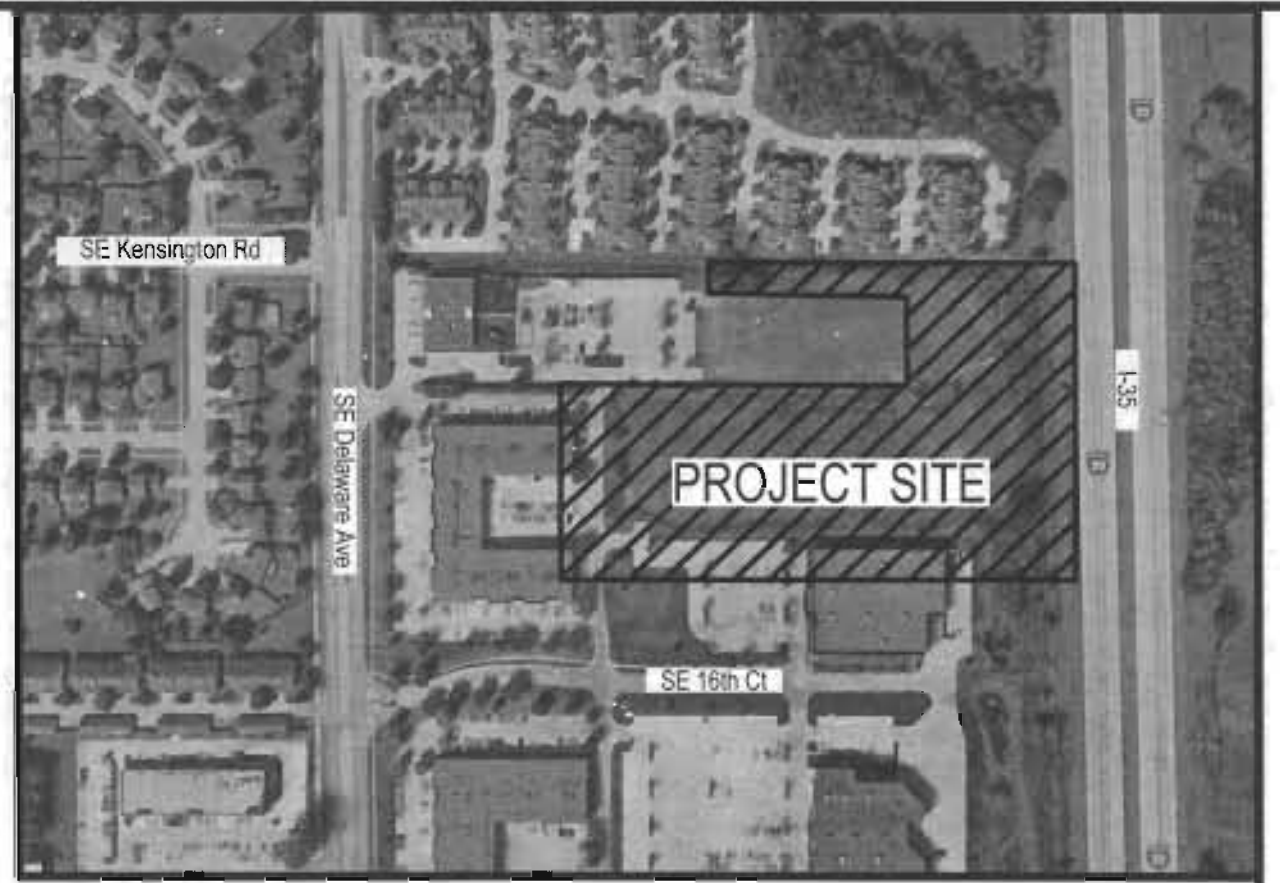
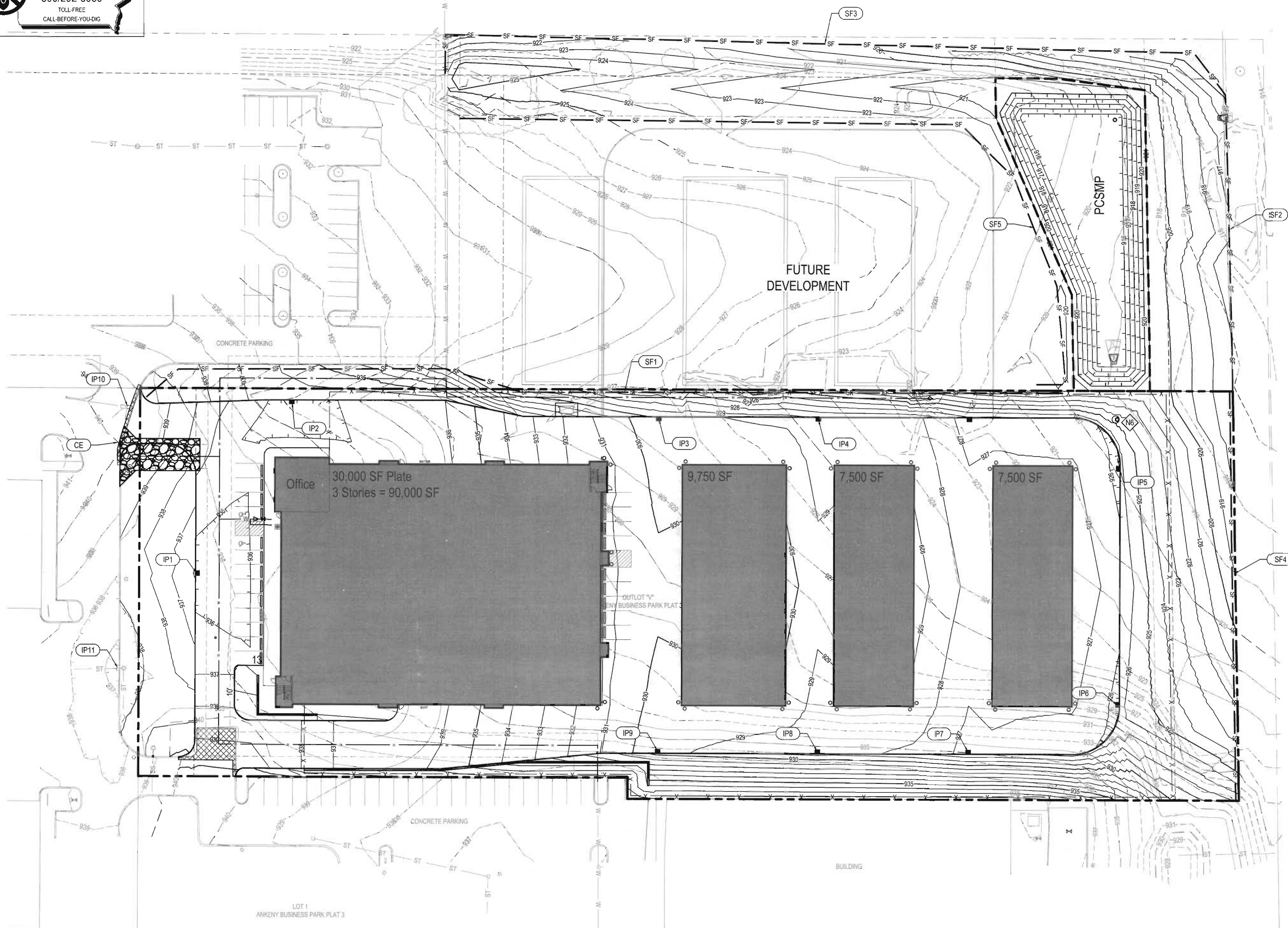
DESIGN
ASSOCIATES,
INC. 402/331-8889
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68164



PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT — ANKENY, IA
STORMWATER POLLUTION PREVENTION PLAN

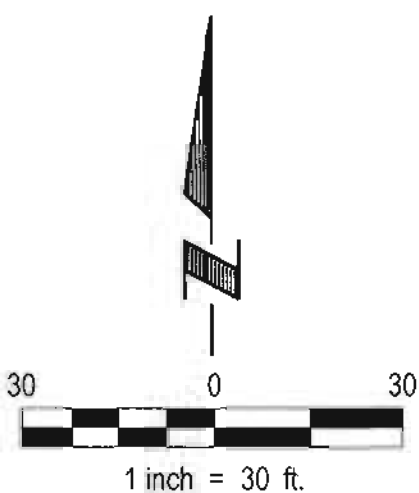
REVISION	JOB NO.	DATE	DRAWN BY:	SHEET NO.
	2016.601	1/3/18	DRH	C6.0

C6.0



VICINITY MAP

Owner/Developer:
Hearland Storage Iowa Inc.
17620 Jones Street
Omaha, NE 68118
Contact: Daryl Lese
daryllese@icloud.com
Cell: 402-695-8814



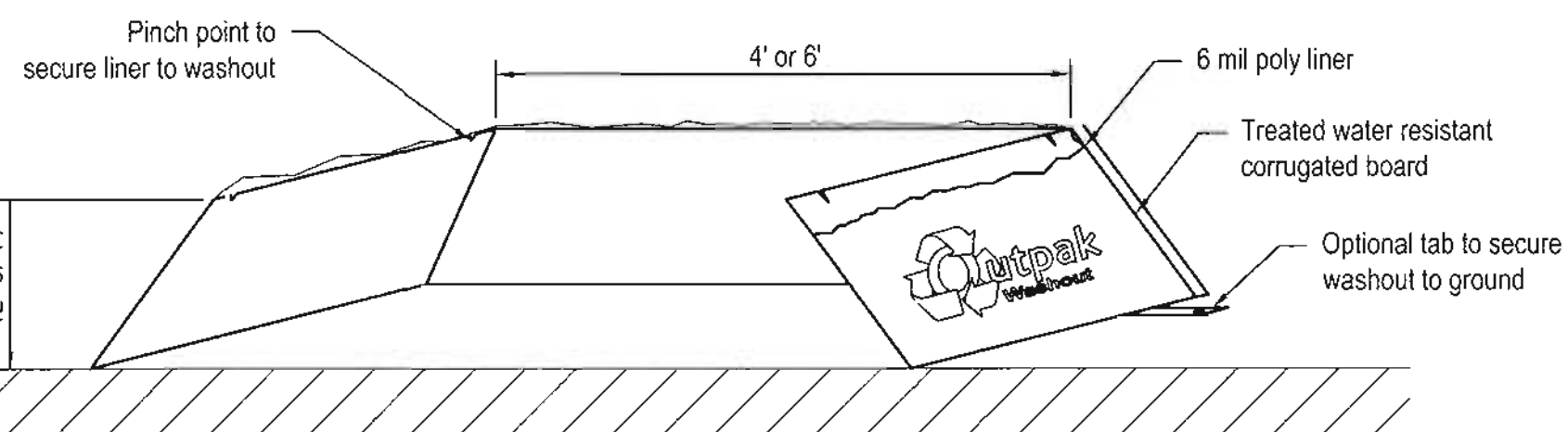
LEGEND

- Power Pole
- Guy Wire
- Light Pole
- Fire Hydrant
- Utility Valve (Water)
- Curb Inlet
- Manhole
- Fence Line
- Gas Line
- Water Line
- Power Line (Overhead)
- Silt Fence
- Existing Contours
- Proposed Contours
- PCSMP Baseline Perimeter
- Property Line

NOTE:
Refer to Landscaping Plan for final site stabilization measures.

Refer to Storm Water Pollution Prevention (SWPPP) Notes on Sheet 6.1

CONCRETE
WASHOUT



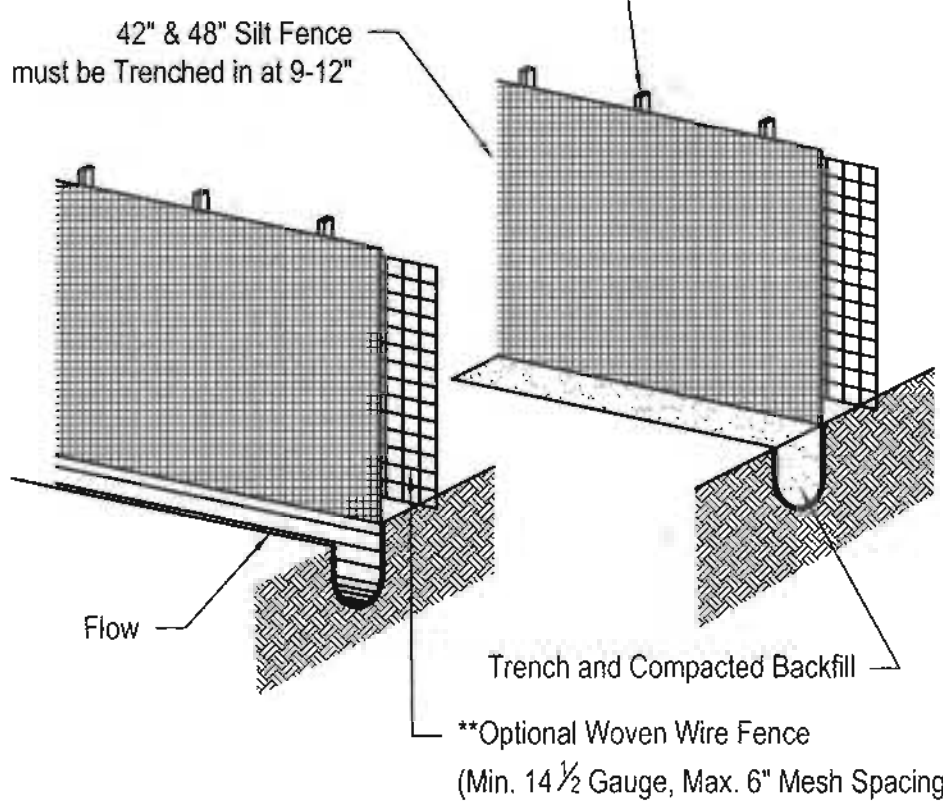
NOTES:

- The concrete washout area shall be installed prior to any concrete placement on this project. Install washout area on a level surface. Use Outpak Disposable Concrete Washout or approved equal.
- Signs shall be placed as necessary to clearly indicate the location of the concrete washout.
- The concrete washout area will be replaced as necessary to maintain capacity for waste concrete and other liquid waste.
- Washout residue shall be removed from the site and disposed of at an approved waste site.
- Do not mix excess amounts of fresh concrete or cement on-site.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not dump excess concrete in non-designated dumping areas.
- Locate washout area at least 50' (15 meters) from storm drains, open ditches, or waterbodies.
- Wash out wastes into the Outpak Washout as shown where the concrete can set, be broken up, and then disposed of properly.

CONCRETE WASHOUT
NOT TO SCALE

NOTES

- Acceptable silt fence specifications- AOS (#20 - 50 Sieve), Water Flow Rate (50 gpm/ sq. ft. - 125 gpm/ sq.ft), Tensile Strength (Grab) - (Min. 120 Warp or greater and Elongation (5-25%).
- On each new run of silt fence spray paint the beginning of the run with 0+00 and spray paint the end with the date of installation and LF of the run.
- Silt fence should be securely fastened to each steel support post or to woven wire which is in turn attached to the steel fence posts. A minimum of 3 ties are required for each post. To be located in the top 12" of the silt fence.
- Steel posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. (Incline all posts 20" Max. from vertical, toward flow)
- Silt fence shall be trenched in with a silt fence plow so that the downslope face of the trench is flat and perpendicular to the line of flow.
- Silt fence shall be removed when it has served its usefulness so as not to block or impede storm flow or drainage.
- Sediment trapped by this practice shall be uniformly distributed on the source area prior to topsoiling.



SILT FENCE
NOT TO SCALE

SEDIMENT & EROSION CONTROL REFERENCE NOTES

- CW1 Furnish and Install Concrete Washout Area. Use Outpak Washout or Engineer Approved Equal. See Detail on This Sheet. Location to vary as paving progresses.
- CE1 Construction Entrance, SUDAS 9040.120
- SF1 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF2 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF3 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF4 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- SF5 Install Silt Fence in 100' Sections (max. length) with J-Hook Ends, SUDAS 9040.119
- IP1 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP2 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP3 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP4 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP5 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP6 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP7 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP8 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP9 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP10 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20
- IP11 Furnish and Install Inlet Protection.* SUDAS Design Manual, 7E-20

*Install Area Inlet Protection on Additional Inlets as Necessary.



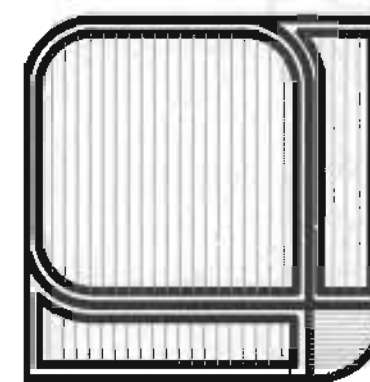
E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10909 Hill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eaacg.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

DESIGN
ASSOCIATES,
INC.
402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA



C6.0

PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT ANKENY, IA
STORMWATER POLLUTION PREVENTION PLAN

REVISION	JOB NO.	DATE	DRAWN BY	CHECKED BY
1	2016.601	1/3/18	DRH	C6.0



MAINTENANCE SCHEDULE:

The following Maintenance Schedule has been provided. The INSPECTOR must perform the Inspections. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control features requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

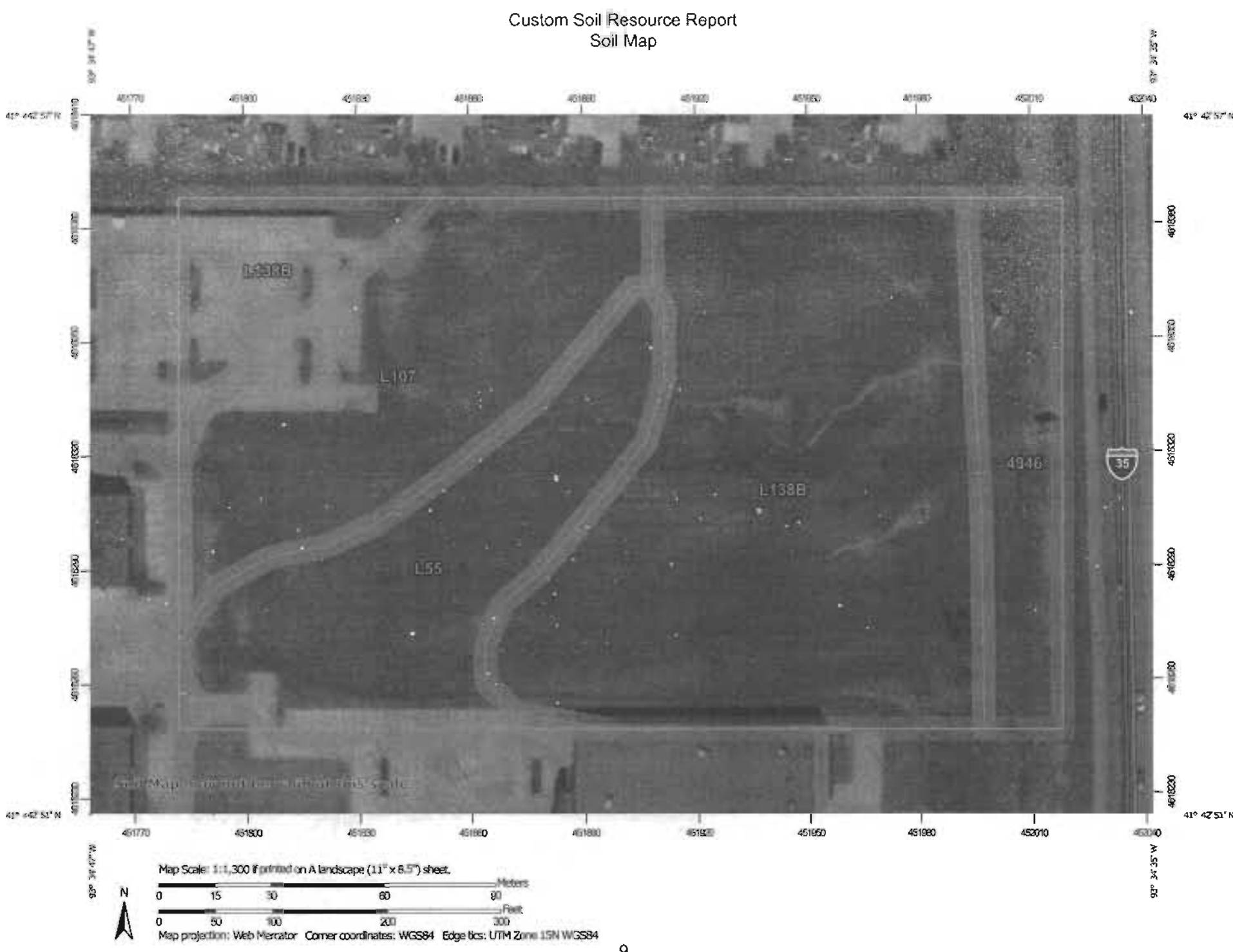
- Construction Entrance** - The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.
- Silt Fence** - The maintenance measures are as follows; (2.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (2.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (2.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (2.4) sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier; and (2.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.
- Storm Drain Inlet Protection** - The maintenance measures are as follows; (3.1) structures shall be inspected after each rain and repairs made as necessary and (3.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.
- Temporary Diversion Dike** - The measure shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.
- Temporary Fill Diversion** - Since the practice is temporary and under most situations will be covered the next working day. The maintenance required should be low. If the practice is to remain in use for more than one day, an inspection shall be made at the end of each work day and repairs made to the measure if needed. The OPERATOR/CONTRACTOR should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.
- Temporary Sediment Trap** - The maintenance measures are as follows: (6.1) sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage; sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems; (6.2) filter stone shall be regularly checked to ensure that filtration performance is maintained; stone choked with sediment shall be removed and cleaned or replaced; and (6.3) the structure should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment, the height of the stone outlet should be checked to ensure that its center is at least 1 foot below the top of the embankment.
- Temporary Sediment Basin** - The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant. The basin should be checked after each runoff producing rainfall for sediment cleanout and trash removal. When the sediment reaches the cleanout level, it shall be removed and properly disposed of.
- Temporary Seeding** - Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified. Control weeds by mowing.
- Permanent Seeding** - The maintenance measures are as follows: (9.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planting; (9.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (9.3) inspect all seeded areas for failures and make necessary repairs, replacements, and reseeds within the planting season, if possible; [9.3a] if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; [9.3b] if stand is 60% damaged, re-establish following seedbed and seeding recommendations; [9.3c] if stand has less than 40% cover, re-evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible; re-establish the stand following seedbed and seeding recommendations.
- Mulching** - All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.
- Soil Stabilization Blankets & Matting** - All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspection should be adequate.
- Street Cleaning/Sweeping** - The maintenance measures are as follows; (12.1) evaluate access points daily for sediment tracking; (12.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track-out such as during rains, cleaning may be done several times throughout the day; (12.3) unknown spills or objects will not be mixed with the sediment; and (12.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

GENERAL NOTES

- All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
- BMP's may not be removed without INSPECTOR and applicable government approval.
- The APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must adhere to all Good Housekeeping BMP's presented within the SUDAS Specifications. Good Housekeeping BMP's focus on keeping the work site clean and orderly while handling materials and waste in a manner that eliminates the potential for pollutant runoff. Good Housekeeping BMP's such as Sanitary Waste Management, Solid Waste Management, Material Delivery & Storage, Street Cleaning/Sweeping, and Vehicle & Equipment Fueling must be addressed when applicable.
- The SWPPP documents (e.g., IDNR-NPDES, SWPPP-SM, SWPPP-N, etc.) are essential and a requirement in one part is as binding as though occurring in all. The SWPPP documents are complementary. The documents describe and provide the complete SWPPP. The APPLICANT, INSPECTOR, and/or CONTRACTORS/OPERATORS may not take advantage of any apparent SWPPP errors or omissions. The INSPECTOR shall notify the APPLICANT, DESIGNER, and CONTRACTORS/OPERATORS promptly of any omissions or errors. The APPLICANT shall instruct the DESIGNER to make any corrections necessary to fulfill the overall intent of the SWPPP Documents (e.g., Grading Permit Modification Form). In the case of a discrepancy between parts of the SWPPP documents, the most stringent requirement shall rule.

CONSTRUCTION ACTIVITIES & SCHEDULING

ACTIVITY	SCHEDULE
Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, silt basins, riser pipes, outlet pipes, silt traps, silt fence, diversions, terraces, etc/etara.	Prior to any stripping of existing vegetation or grading.
Proceed with stripping off existing vegetation and grading in accordance with the grading plan, while disturbing no more than is necessary.	After installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading.
Proceed with infrastructure installation.	Infrastructure installation must occur prior to any lot development.
Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching.	Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
Implement the Installation all BMP's needed and associated with the Building Phase.	Building Phase BMP's must be installed concurrently with lot development.
Proceed with removal of BMP's.	BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's.



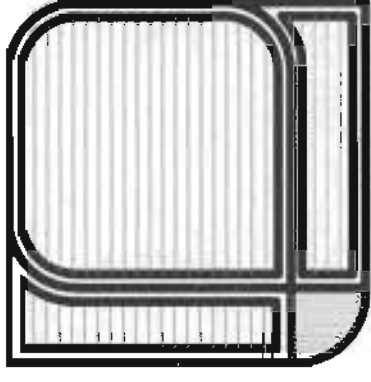


E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

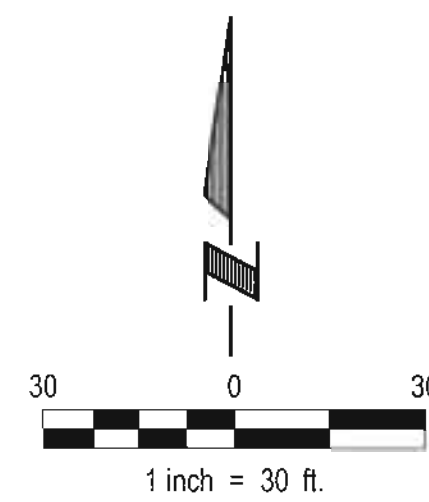
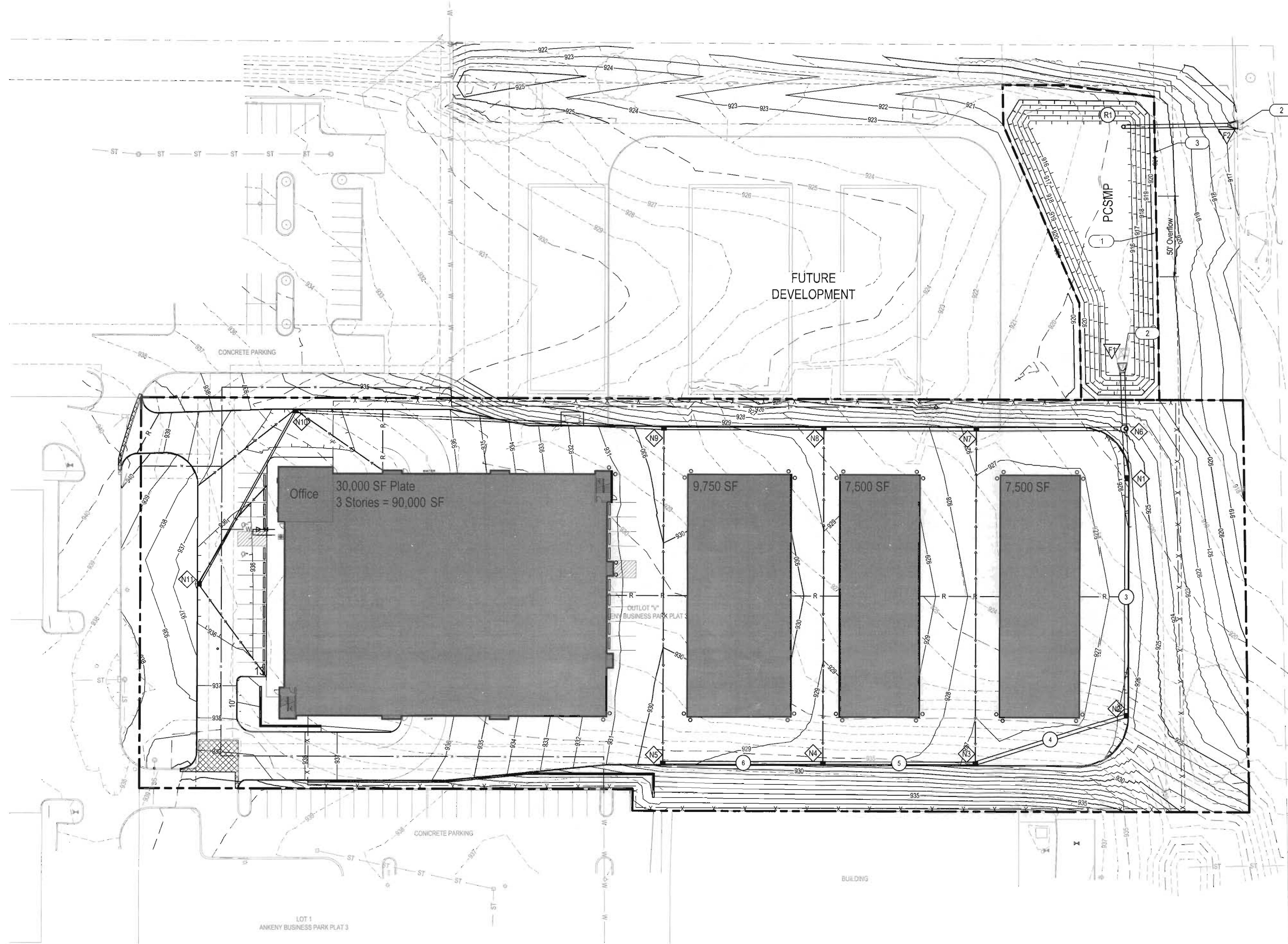
10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eaacg.com

P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

PLANS FOR:	EXTRA SPACE STORAGE FACILITY			
	1204 S 16TH COURT ANKENY, IA			
REVISION	JOB NO.	DATE	DRAWN BY:	SHEET NO.
	2016.601	1/3/18	DRH	C6.1
DESIGN ASSOCIATES, INC.		402/331-8989 12550 WEST MAPLE ROAD OMAHA, NEBRASKA 68164		
				
		C6.1		

STORMWATER POLLUTION PREVENTION NOTES

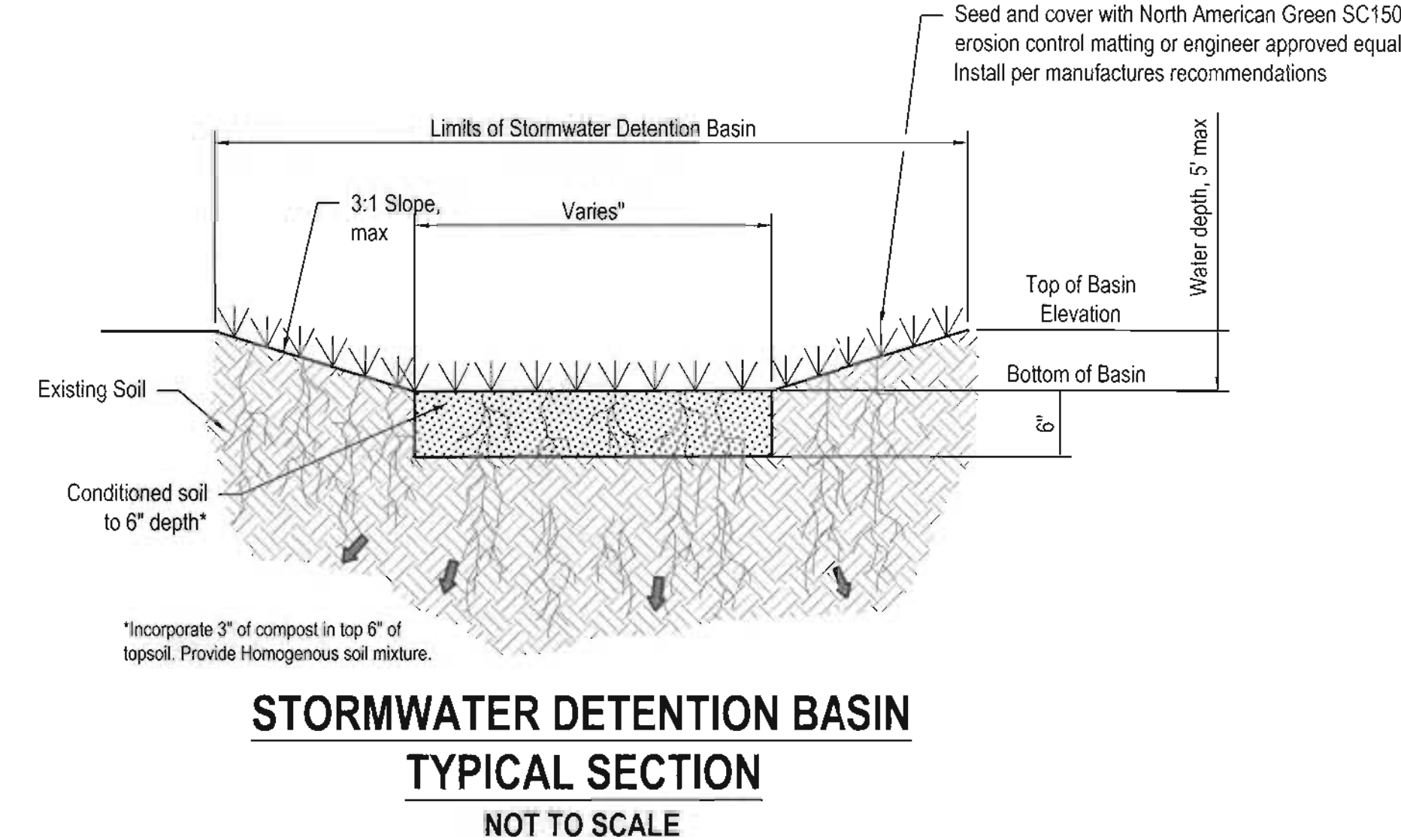
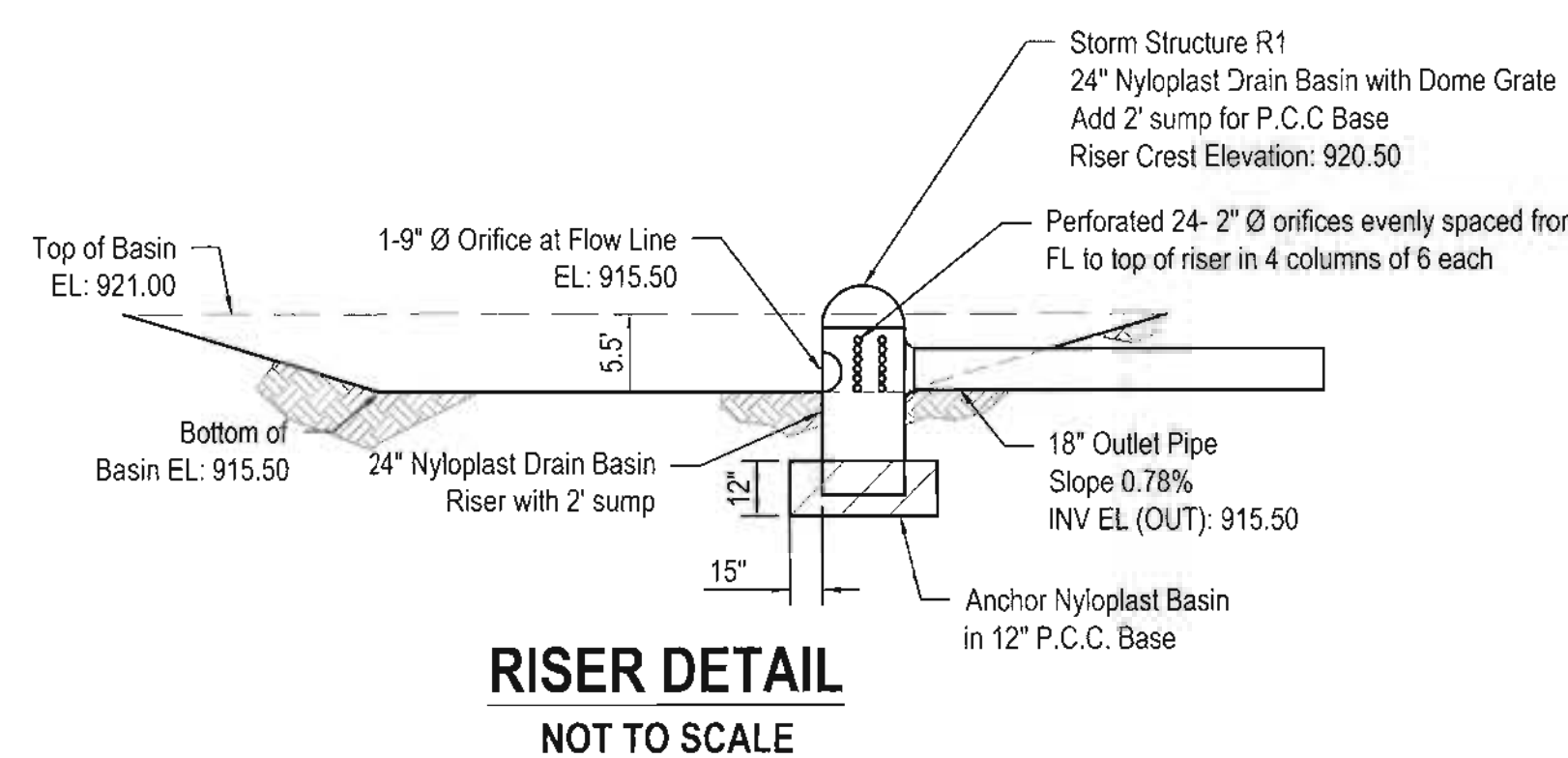
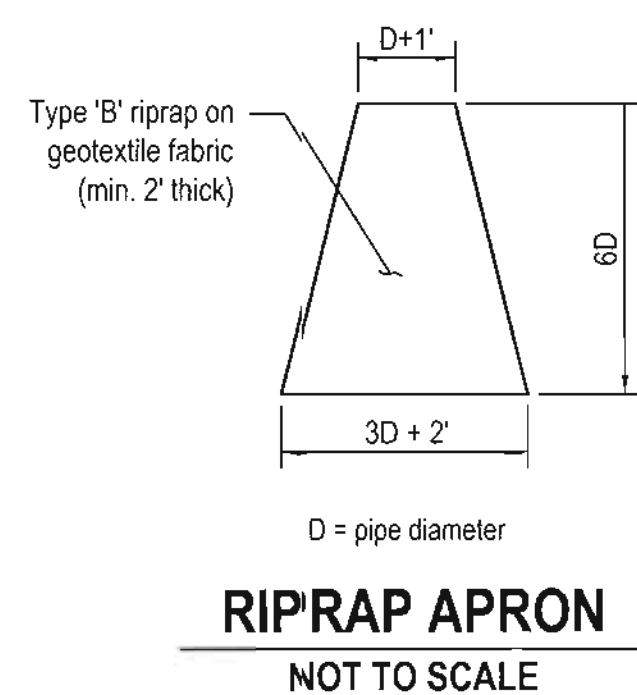
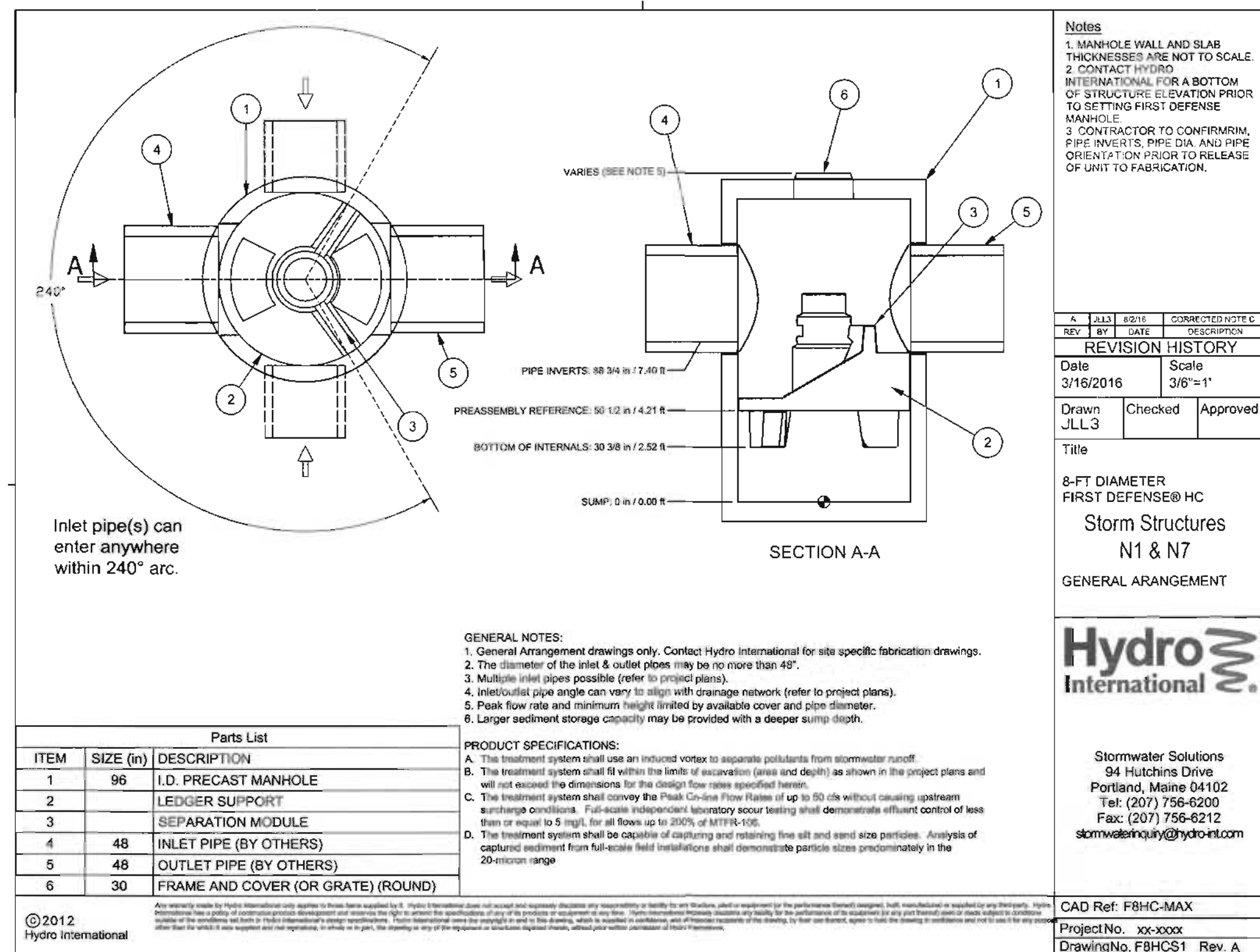


LEGEND

- Storm Sewer Pipe Network
- Sanitary Sewer Pipe Network
- Sediment Basin Perimeter
- Property Line

PCSMP REFERENCE NOTES

- 50' basin overflow, elev. 921.00 (Top of Basin)
- Install Class B rip rap at flared end section, see detail on this sheet.
- 100 year flood elevation: 920.82 (Top of Basin)



STORMWATER DETENTION BASIN
TYPICAL SECTION
NOT TO SCALE



E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10901 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eaog.com

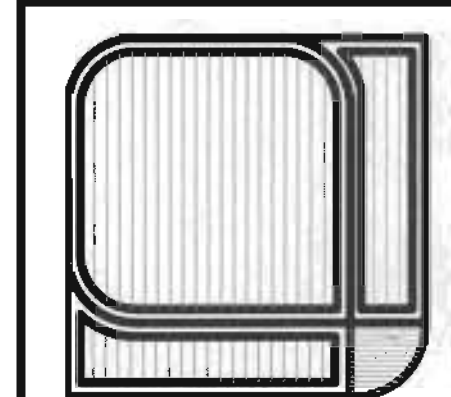
P2016.601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

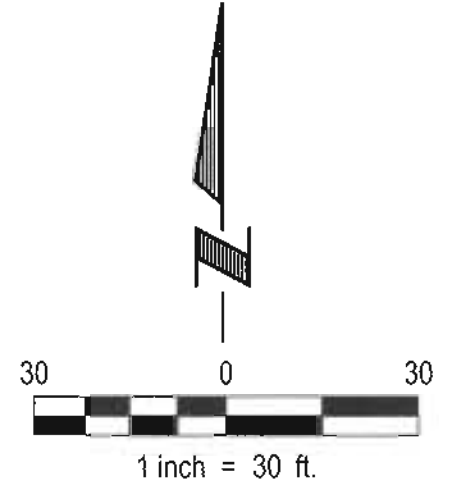
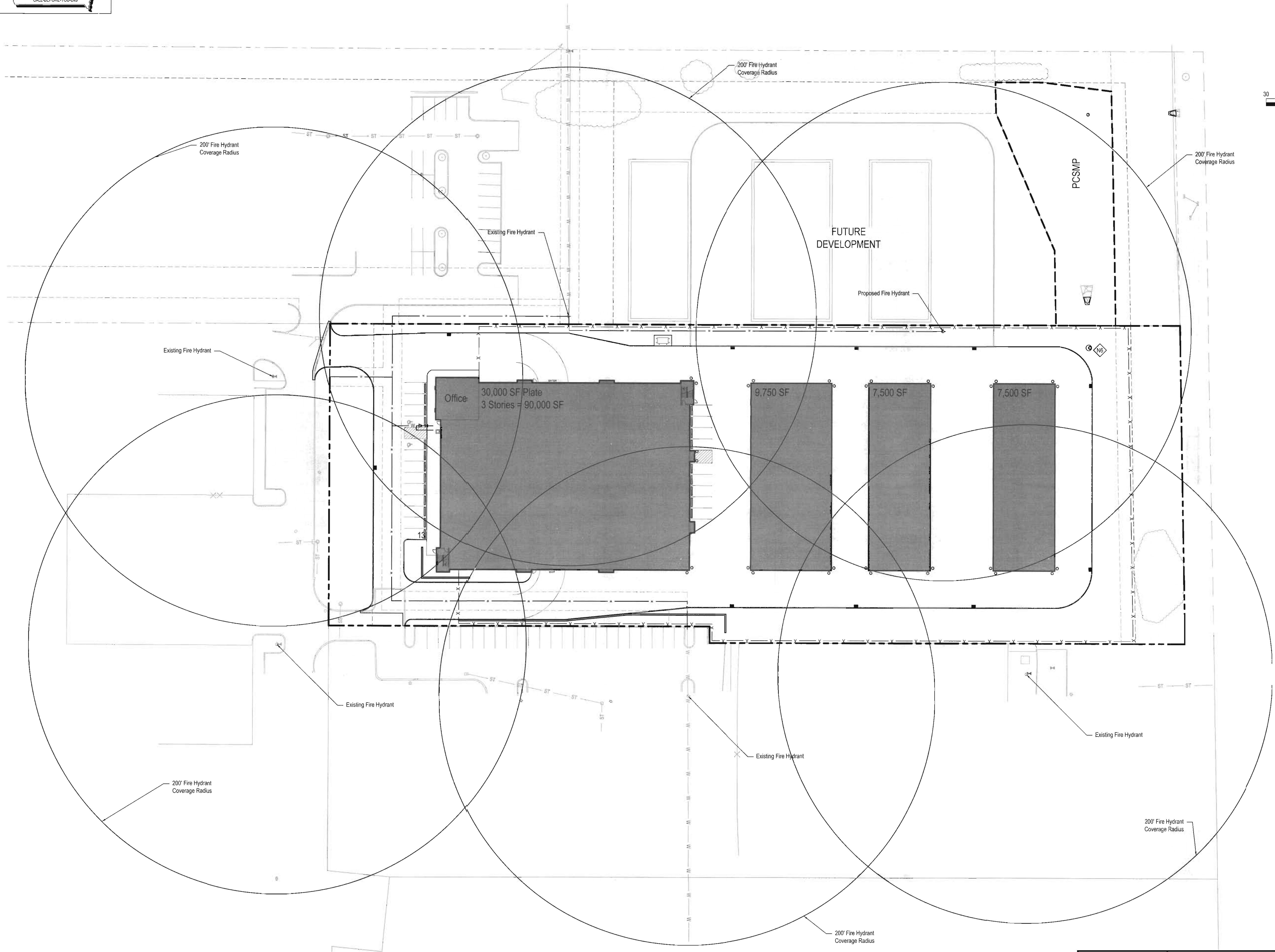
PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT — ANKENY, IA
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

REVISION	JOB NO.	DATE	DRAWN BY	SHEET NO.
	2016.601	1/3/18	DRH	C7.0

DESIGN
ASSOCIATES,
INC. 402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA



C7.0

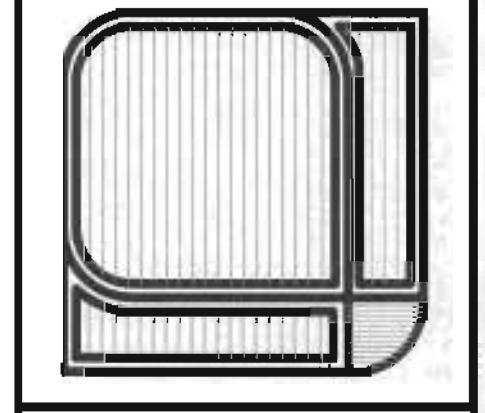


PLANS FOR:
EXTRA SPACE STORAGE FACILITY
1204 S 16TH COURT — ANKENY, IA
FIRE PLAN

REVISION

JOB NO. 2016.601
DATE 1/3/18
DRAWN BY: DRH
SHEET NO. C8.0

DESIGN
ASSOCIATES,
INC.
402/331-8989
12550 WEST MAPLE ROAD
OMAHA, NEBRASKA 68164



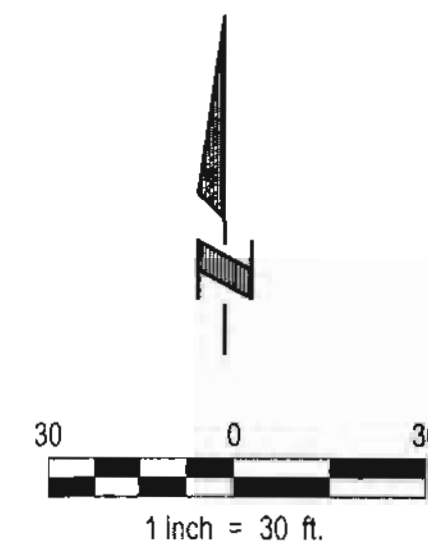


E & A CONSULTING GROUP, INC.
Engineering • Planning • Environmental & Field Services

10309 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eagroup.com

P2016.601.002

C8.0



LEGEND

NOTE: FOR REFERENCE ONLY, ITEMS DEPICTED IN LEGEND MAY NOT APPEAR ON PLANS.

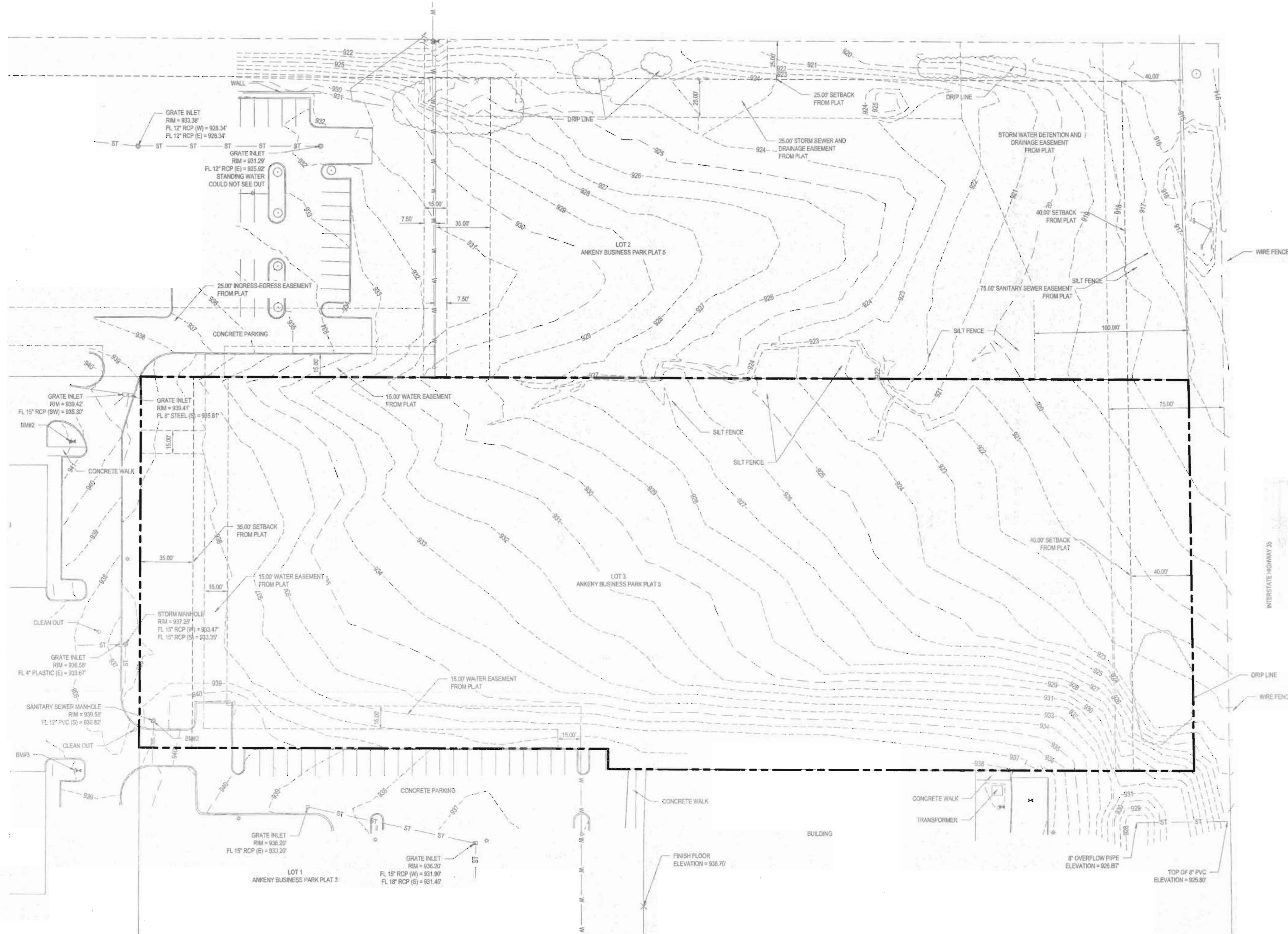
- SECTION CORNER
- PROPERTY CORNER FOUND (AS NOTED)
- PROPERTY CORNER SET (58" REBAR)
- BUILDING
- POWER RISER
- LIGHT POLE
- TELEPHONE RISER
- CABLE TV RISER
- FIRE HYDRANT
- UTILITY VALVE (WATER)
- MANHOLE
- FLARED END SECTION (SIZE NOTED)
- CURB INLET
- UTILITY VALVE (GAS)
- SIGN
- FENCE LINE
- WATER LINE
- UGP - UGP - POWER LINE (UNDER GROUND)
- UTV - UTV - COMMUNICATION LINE (TELEPHONE, TV)
- SS - SS - SANITARY SEWER LINE
- ST - ST - STORM SEWER LINE

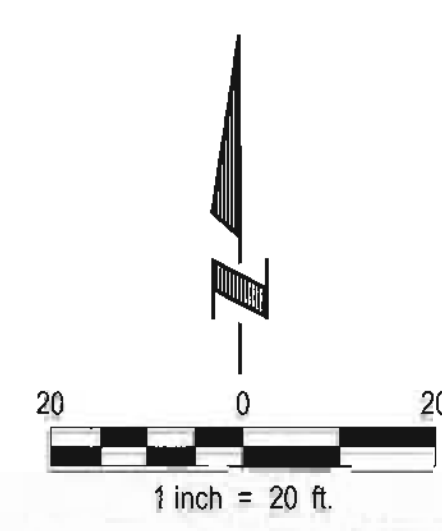
BENCHMARKS:

- BM#1 NORTHWEST RIM BOLT 2ND FIRE HYDRANT NORTH OF SOUTHEAST 16TH COURT EAST OF SUITE A (1553 S.E. DELAWARE AVENUE). EL = 943.39.
- BM#2 NORTH RIM SANITARY MANHOLE NORTH-EAST CORNER OF SLUMBERLAND FURNITURE, NORTH ENTRANCE. EL = 939.61.
- BM#3 NORTHWEST RIM BOLT 1ST FIRE HYDRANT NORTH OF SOUTHEAST 16TH COURT WEST OF SLUMBERLAND FURNITURE, NORTH ENTRANCE. EL = 939.61.

UTILITIES NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM OBSERVED EVIDENCE TOGETHER WITH EVIDENCE FROM PLANS OBTAINED FROM UTILITY COMPANIES OR PROVIDED BY CLIENT. AND MARKING BY UTILITY COMPANIES AND OTHER APPROPRIATE SOURCES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND UTILITIES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAN OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES.





PLANT SCHEDULE

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE
A	17	Gleditsia triacanthos 'Skyline'	Skyline Honeylocust	2"	B&B
B	17	Quercus rubrum	Red Oak	2"	B&B
C	11	Acer freemanii 'Jeffersred'	Autumn Blaze Maple	2"	B&B
D	3	Celtis occidentalis	Hackberry	2"	B&B
E	12	Pinus flexilis 'Vanderwolf Pyramid'	Vanderwolf Pine	8'-9"	B&B
F	32	Picea pungens 'Glauca'	Colorado Blue Spruce	8'-9"	B&B
G	12	Abies concolor	Concolor Fir	8'-9"	B&B
H	77	Juniperus chinensis 'Sea Green'	Sea Green Juniper	3 Gal.	Cont
I	16	Euonymus alatus compactus	Dwarf Burning Bush	3 Gal.	Cont
J	32	Cornus stolonifera 'Farrow'	Arctic Fire Red Twig Dogwood	3 Gal.	Cont

NOTES:

- Areas to be installed with sod & irrigation.
- PCSMP area - See Sheet C6.0 for details.

CITY OF ANKENY: OPEN SPACE, LOT SHADING & LANDSCAPING CALCULATIONS / SCREENING REGULATIONS

191.15 Minimum Open Space:

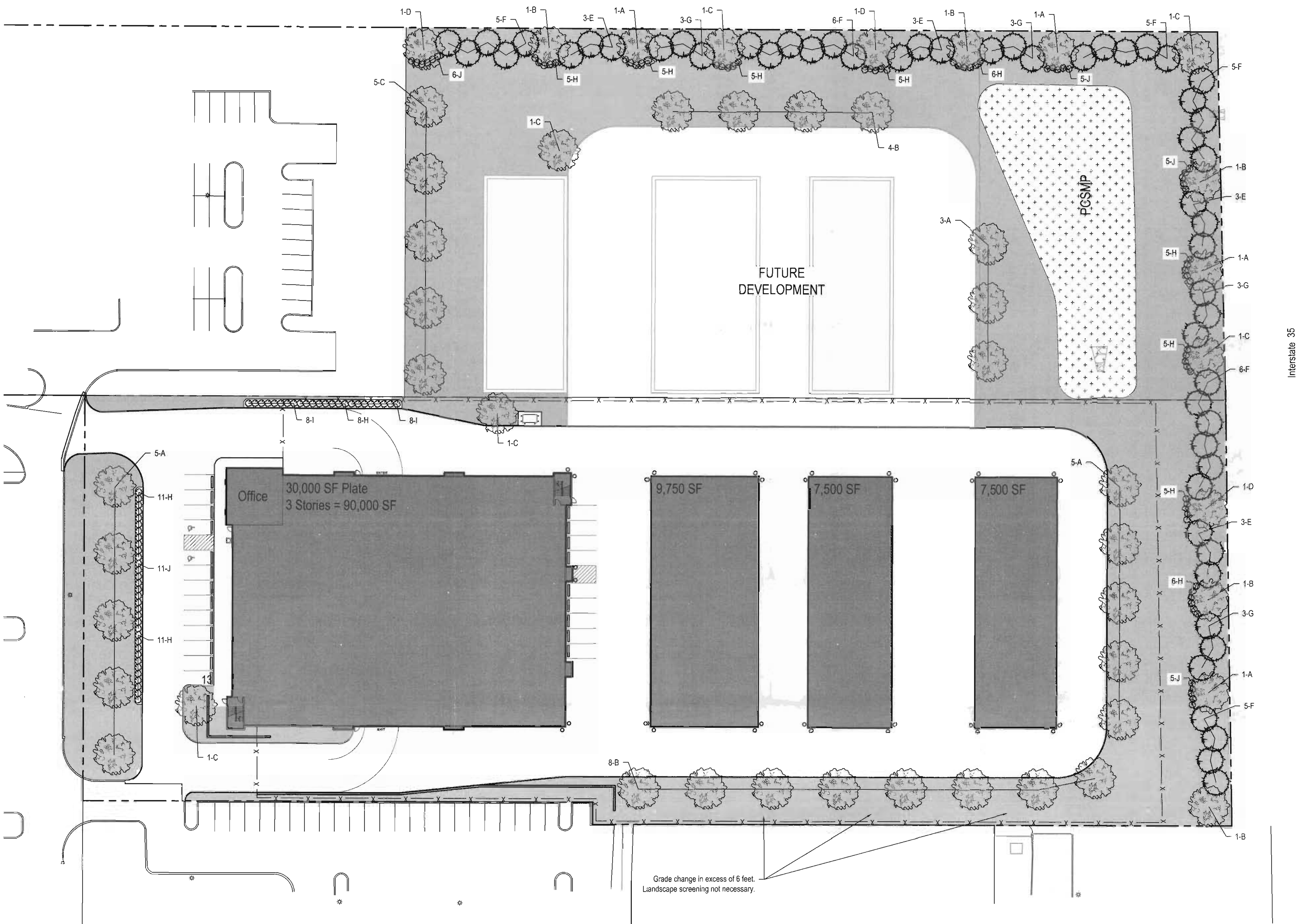
North Lot - Gross Land Area = 107,886 x .20 = 21,577 SF 21,577 / 3,000 SF = 7.19	Required = 21 trees 21 shrubs	Provided = 56 trees 52 shrubs
South Lot - Gross Land Area = 171,335 x .20 = 34,267 SF 34,267 / 3,000 SF = 11.4	Required = 33 trees 33 shrubs	Provided = 19 trees 73 shrubs
Lots Combined - Gross Land Area = 279,221 x .20 = 55,844 SF 55,844 / 3,000 SF = 18.6	Required = 57 trees 57 shrubs	Provided = 75 trees 125 shrubs

194.01(6)(E) Off Street Parking-Parking Area Landscaping

Shading Tree Calculation:

North Lot - Total Paved Area = 28,658 x .20 = 5,732 SF 5,732 / 706 SF = 8.1	Required = 8 trees	Provided = 8 trees
South Lot - Total Paved Area = 69,818 x .20 = 13,964 SF 13,964 / 706 SF = 19.8	Required = 20 trees	Provided = 20 trees
Lots Combined - Total Paved Area = 98,476 x .20 = 19,695 SF 19,695 / 706 SF = 27.9	Required = 28 trees	Provided = 28 trees

194.02 (B) Screening: See Table. Semi-Opaque Screen, Type B - a screen that is opaque from the ground to a height of three feet, with intermittent visual obstruction from above the opaque portion to a height of at least 20 feet. The semi-opaque screen is intended to partially block visual contact between uses and to create a strong impression of the separation of spaces. The semi-opaque screen may be composed of a wall, fence, landscaped earth berm, planted vegetation, or existing vegetation. Compliance of planted vegetative screens or natural vegetation will be judged on the basis of the average mature height and density of foliage of the subject species, or field observation of existing vegetation. At maturity, the portion of intermittent visual obstructions should not contain any completely unobstructed openings more than ten feet wide. The zone of intermittent visual obstruction may contain deciduous plants.



LANDSCAPE NOTES:

- Locate and verify the location of all underground utilities prior to the start of any construction. Care should be taken not to disturb any existing utilities during construction. Any damage to utilities or other improvements caused by the Contractor will be repaired at no cost to the Owner.
- All plant material shall be of good quality and sizes shall meet required size specifications.
- All plants are to be watered in immediately after planting and then watered once a week for a period of two months from time of planting.
- All plant material shall be guaranteed to be in a live and healthy growing condition for two full growing seasons (trees) and one full growing season (perennials & shrubs) after final project acceptance or shall be replaced free of charge with the same grade and species including labor.
- Verify all dimensions and conditions prior to starting construction. The location of plant material is critical and shall be installed as indicated on plans. Field adjustments may be necessary based on field conditions (i.e., root ball and drop inlet conflict). All adjustments must be approved by the landscape architect.
- The Landscape Contractor shall remove all construction debris and materials injurious to plant growth from planting pits and beds prior to backfilling with planting mix. All planting areas shall be free of weeds and debris prior to any work.
- Provide locally available shredded hardwood mulch on all trees and in all planting beds to a 3-4 inch minimum depth unless otherwise noted. Mulch ring to extend 1'-0" minimum beyond planting pit. Minor site grading to be included if needed.
- All trees are to be staked for a period of not less than one year from time of planting.
- Contractor to coordinate work with other amenities contractors.

IRRIGATION NOTES:

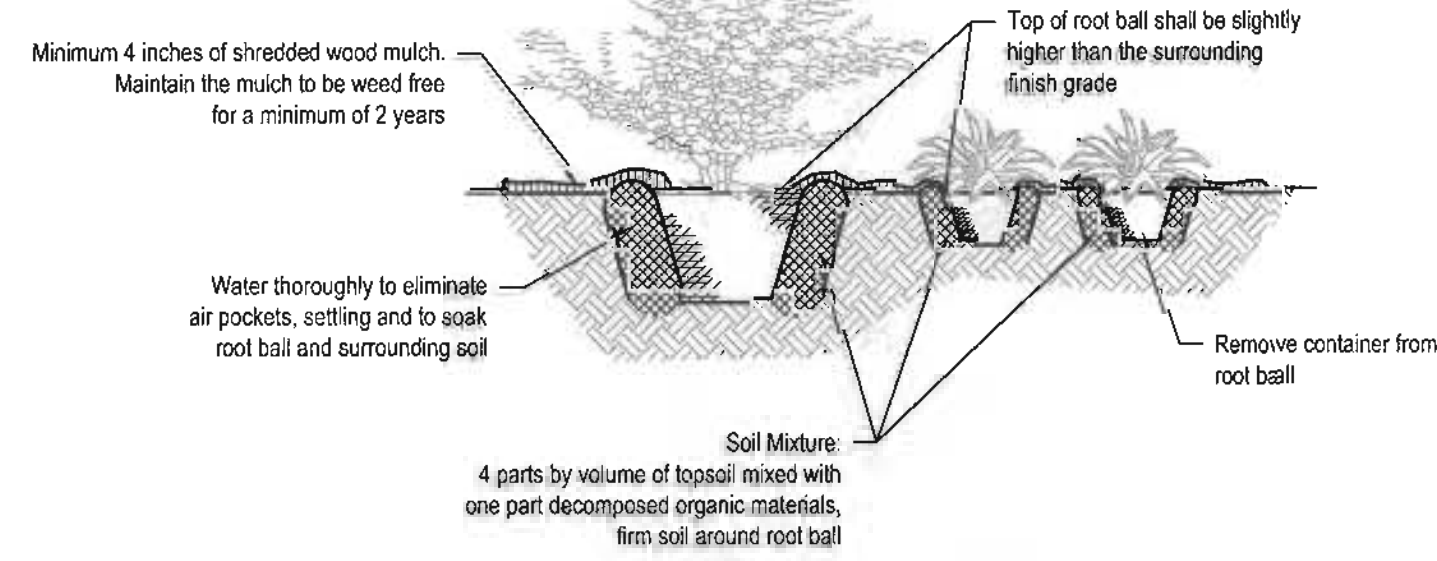
- Irrigation bid to include meter pit and city utility fees.
- Irrigate all sodded areas.
- Irrigation controller to be mounted in a steel utility box with hasp for pad lock.
- Irrigation system to be guaranteed for 1 year. Written guarantee to be supplied prior to final payment.
- Irrigation contractor responsible to winterize system one time.
- Irrigation contractor to furnish as built drawing of the system and catalogue cuts of the installed equipment prior to final payment.
- Irrigation contractor to provide owner and engineer an irrigation plan shop drawing and equipment catalog cuts for approval prior to installation.
- Contractor to coordinate work with other amenities contractors.

SODDING NOTES:

- The contractor shall notify the architect at least forty-eight hours in advance of the time he intends to begin sodding and shall not proceed with such work until permission to do so have been granted. No frozen sod shall be placed. No sodding shall be done on frozen earth.
- Care shall be exercised at all times to retain the native soil on the roots of the sod during the process of transplanting. Dumping from vehicles will not be permitted. The sod shall be planted within eighteen (18) hours from the time it is harvested unless it is tightly rolled or stored roots-to-roots in a satisfactory manner. All sod in stacks shall be kept moist and shall be protected from exposure to the sun and from freezing. No storage longer than three (3) days will be permitted. Sod which becomes dried out or does not meet the specifications will be rejected.
- There shall be a minimum of six inches, after tamping, of topsoil under all sod. Excavations or trenching shall be made to a sufficient depth below the finished grade of the sod to accommodate the depth of topsoil as specified and the thickness of sod as specified. Fertilizer shall be applied at a rate to provide 100 pounds of nitrogen per acre unless fertilizer has been applied under another item in this contract to the topsoil in the sod bed. Fertilizer applied under this item shall be incorporated with the topsoil to a depth of at least two inches before the sod is laid, unless otherwise specified or approved. Incorporation shall be accomplished by disking, harrowing, drilling, raking or other approved means.
- The soil on which the sod is laid shall be reasonably moist and shall be watered, if so directed. The sod shall be laid smoothly, edge to edge, and all openings shall be plugged with sod. Immediately after the sod is laid, it shall be pressed firmly into contact with the sod bed by tamping, rolling, or by other approved methods so as to eliminate all air pockets, provide true and even surfaces, insure knitting and protect all exposed sod edges but without displacement of the sod or deformation of the surface of the sodded areas and watered at the rate of five gallons per square yard of sodded area unless otherwise directed.
- The contractor shall take care of the sodded areas until all work on the entire contract has been completed, and sod has been mowed twice and then accepted. Such care shall consist of providing protection against traffic by approved warning signs or barricades and the mowing of grass to the height of two inches when the growth attains a maximum height of four inches.
- Sod shall also be watered. When the sod is watered, sufficient water shall be applied to wet the sod at least two inches deep in the sod bed. Watering shall be done in a manner which will not cause erosion or other damage to the finished surfaces. Any surfaces which become gullied or otherwise damaged shall be repaired to reestablish the grade and conditions of the soil prior to sodding and shall then be re-fertilized and re-sodded as specified under this item.
- In drainage-ways or slopes, the sod shall be laid with their longest dimensions parallel to the contours. Such sodding shall begin at the base of slopes or grades and the sodding progress in continuous parallel rows working upward. Vertical joints between such sodding shall be staggered. All sod shall be laid to the grades specified and the grades formed with special care at the junction of drainage-ways.
- Sod shall be held in place by stakes in all drainage-ways, on all slopes steeper than 4:1 and elsewhere where specified or as directed. Pegging shall be done immediately after tamping. At least one stake shall be driven through each sod to be staked, and the stakes shall not be more than two feet apart. Stakes shall have their flat sides against the slope and be driven flush. Stakes for pegging sod shall be of wood, approximately one inch by two inches and of sufficient length to penetrate the sod, the topsoil and to a minimum depth of two inches of subsoil.
- The contractor shall keep all sodded areas thoroughly watered for a period of thirty (30) calendar days after the initial laying and as often as required thereafter until sod has been fully established (two mowings) and accepted by the engineer and owner. Contractor to use temporary irrigation for the watering of the sod. Contractor to supply all necessary hoses, fittings and sprinklers for all watering needs.
- All sod must be fully established (two mowings) and growing at the time of inspection and acceptance.

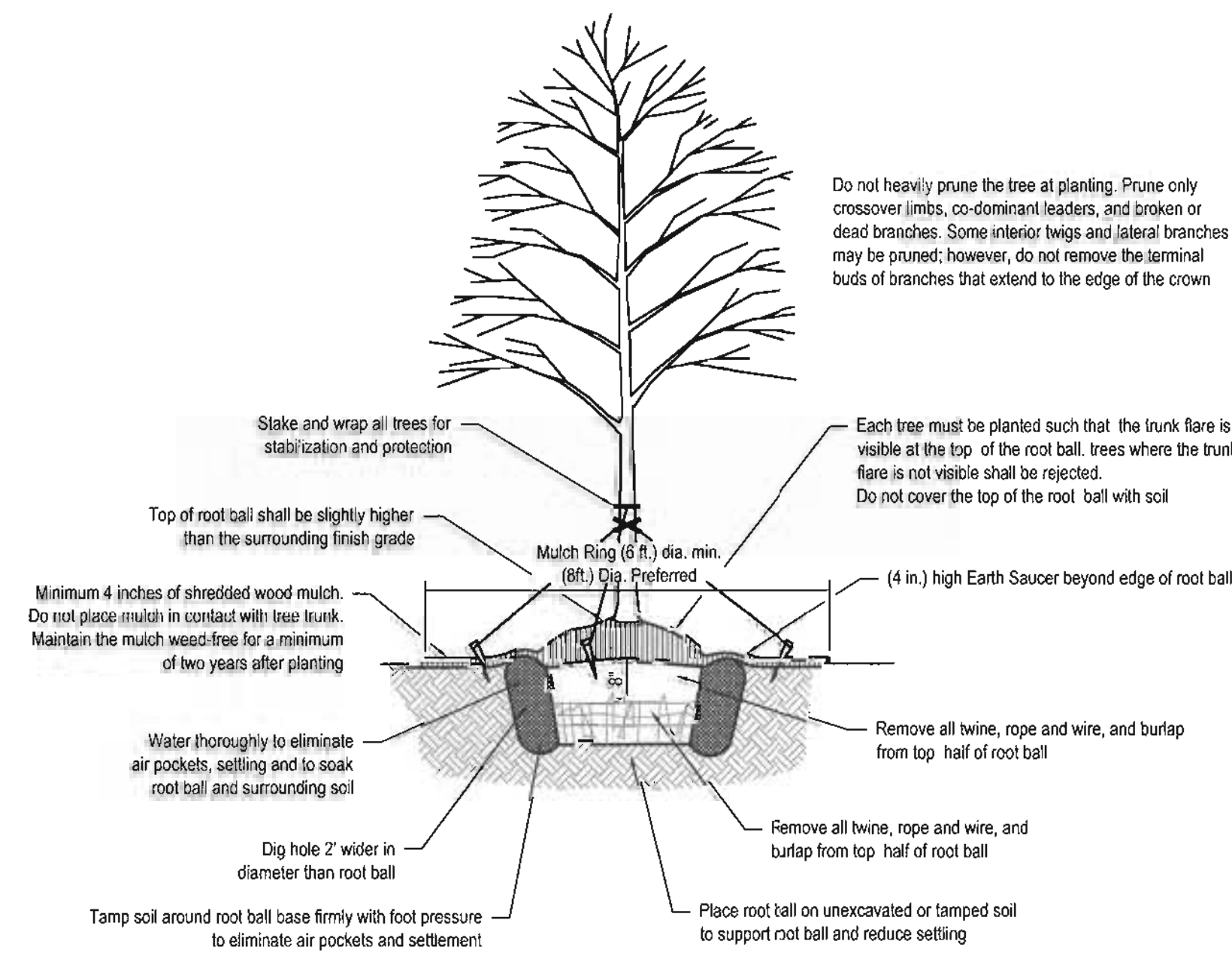
SITE OPEN SPACE CALCULATIONS

North Lot - Gross Area = 107,886 SF	North Lot - Paving SF = 28,658 SF
South Lot - Gross Area = 171,334 SF	South Lot - Paving SF = 69,818 SF
Lots Combined - Gross Area = 279,220 SF	Lots Combined - Paving SF = 98,476 SF
North Lot - Building SF = 21,450 SF	North Lot Impervious Area = 50,108 SF
South Lot - Building SF = 55,321 SF	South Lot Impervious Area = 125,139 SF
Lots Combined - Building SF = 76,771 SF	Lots Combined Impervious Area = 175,247 SF
North Lot Open Space = 57,778 SF = 53.3%	
South Lot Open Space = 46,195 SF = 26.9%	
Lots Combined Open Space = 103,973 SF = 37.2%	



SHRUB & PERENNIAL PLANTING DETAIL

NOT TO SCALE



TREE PLANTING DETAIL - B & B TREE

NOT TO SCALE



E & A CONSULTING GROUP, INC.

Engineering • Planning • Environmental & Field Services

10909 Mill Valley Road, Suite 100 • Omaha, NE 68154
Phone: 402.895.4700 • Fax: 402.895.3599
www.eacg.com

P2016 601.002

COPYRIGHT 2017 DESIGN ASSOCIATES, INC.

PLANS FOR:
EXTRA SPACE STORAGE FACILITY

1204 S 16TH COURT — ANKENY, IA

LANDSCAPE PLAN

REVISION

CS NO.

2016.001

DATE

1/3/18

DRAWN BY:

DRH

SHEET NO.

69154

OMAHA, NEBRASKA

L1.0

DESIGN ASSOCIATES, INC.

402/331-8989

12550 WEST MAPLE ROAD

OMAHA, NEBRASKA

L1.0