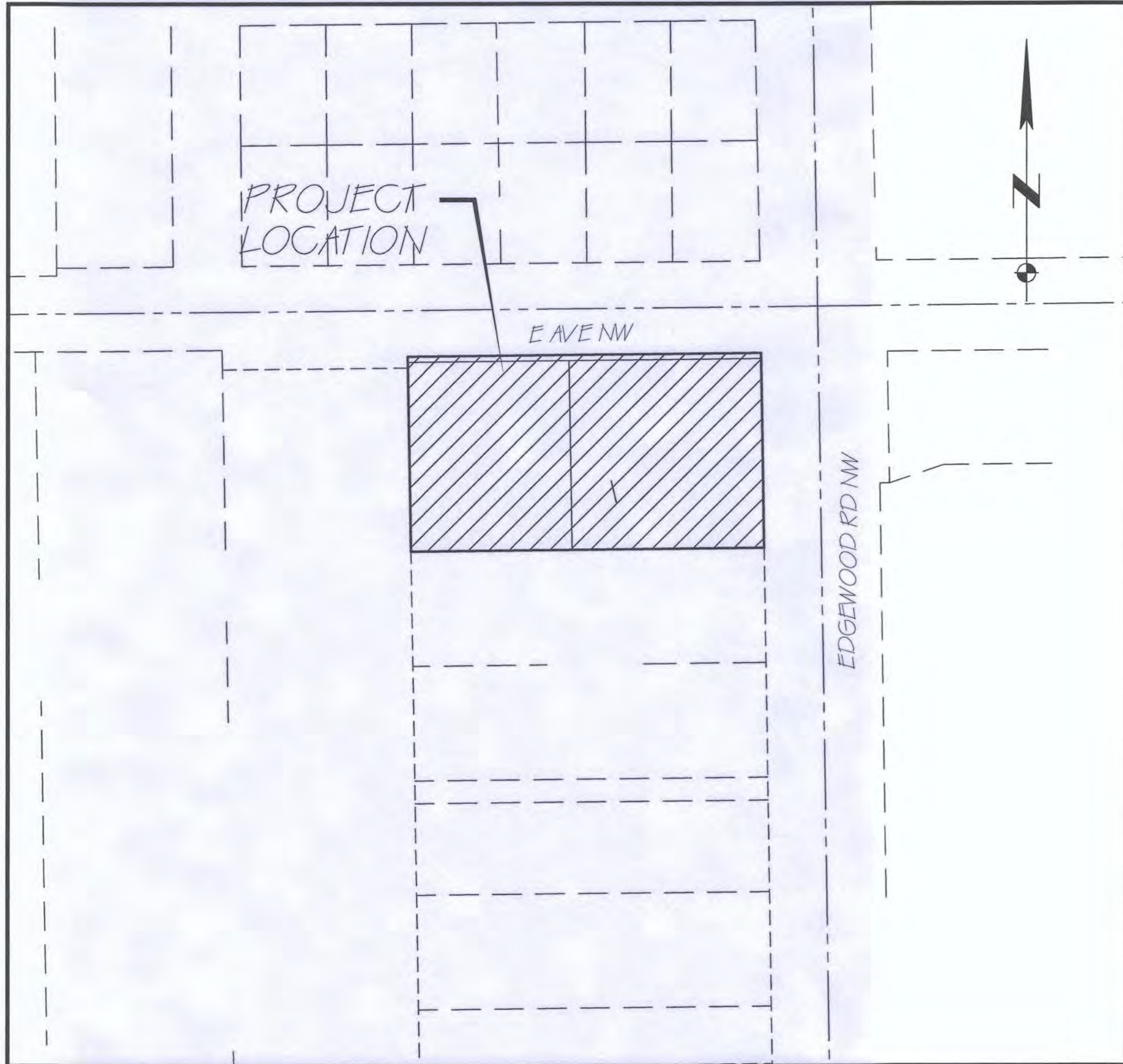


DRAWINGS OF PROPOSED IMPROVEMENTS
FOR
POPEYES
IN THE CITY OF CEDAR RAPIDS, LINN COUNTY, IOWA

UTILITY AND EMERGENCY TELEPHONE NUMBERS
CITY OF CEDAR RAPIDS, IOWA

PUBLIC WORKS DEPARTMENT	(319)-286-5802
POLICE DEPARTMENT	(319)-286-5491
EMERGENCY	911
FIRE DEPARTMENT	(319)-286-5200
EMERGENCY	911
WATER DEPARTMENT	(319)-286-5910
SEWER MAINTENANCE DEPARTMENT	(319)-286-5815
IOWA ONE CALL (UTILITIES)	(800)-292-8989
MID-AMERICAN ENERGY	(319)-298-5162
CENTURY LINK (TELEPHONE)	
ENGINEER, WEST SIDE	(319)-399-7600
ENGINEER, EAST SIDE	(319)-399-7487
ALLIANT/I.E.S. INDUSTRIES (ELECTRIC, STEAM)	
INFORMATION	(319)-786-1912
	(319)-786-1959
MEDIACOM (CABLE TV)	
BUSINESS	(319)-395-9699
LOCATIONS	(800)-292-8989
WINDSTREAM (TELEPHONE / CABLE TV)	
BUSINESS	(319)-790-7114
LOCATIONS	(800)-292-8989
IMON (TELEPHONE / CABLE TV)	(319)-261-4670
SOUTHSLOPE (TELEPHONE / CABLE TV)	(319)-665-5312
LINN COUNTY REC	(319)-377-1587
CEDAR RAPIDS AND IOWA CITY RAILWAY COMPANY	(800)-283-1540
IOWA DEPARTMENT OF TRANSPORTATION	
DISTRICT ENGINEER	(319)-364-0235
MAINTENANCE GARAGES	(319)-364-8189
LINN COUNTY ENGINEER	(319)-892-6400
LINN COUNTY MAINTENANCE	(319)-892-6420

LOCATION MAP
(NOT TO SCALE)



SHEET INDEX

NO.	DESCRIPTION
C1.0	COVER
C2.0	SITE DEMOLITION PLAN
C3.0	SITE LAYOUT PLAN
C4.0	SITE UTILITY PLAN
C5.0	SITE GRADING AND EROSION CONTROL PLAN
C6.0	SITE PAVING PLAN
C7.0	SITE CONSTRUCTION NOTES AND DETAILS
C8.0	SITE CONSTRUCTION NOTES AND DETAILS
C9.0	SITE CONSTRUCTION NOTES AND DETAILS
C10.0	SITE TRAFFIC CONTROL PLAN
L1.0	SITE LANDSCAPE PLAN

APPLICANT/OWNER

HALF MOON, LLC
34 REDBUD PLACE
IOWA CITY, IOWA 52246
CONTACT: JEFF BRAVERMAN
JABRAVERMAN@GMAIL.COM
PHONE: 319-331-1321

DIMENSIONAL STANDARDS

FRONT YARD: 0 FEET
INTERIOR SIDE YARD: 0 OR 1
FT/3 FT IF STRUCTURE
EXCEEDS 45 FT IN HEIGHT
CORNER SIDE YARD: 0 FEET
REAR YARD: 0 OR 1
FT/3 FT IF STRUCTURE
EXCEEDS 45 FT IN HEIGHT

AREA CALCULATIONS (PROPOSED LOT 1)

TOTAL SITE AREA: 27,716 S.F. = 0.64 AC
EXISTING HARD SURFACE: 3,757 S.F. = 0.086 AC (13.56%)
EXISTING OPEN SPACE: 23,959 S.F. = 0.55 AC (86.44%)
PROPOSED PAVED SURFACE: 17,108 S.F. = 0.39 AC (61.73%)
PROPOSED BUILDING AREA: 2,948 S.F. = 0.07 AC (10.64%)
PROPOSED OPEN SPACE: 7,660 S.F. = 0.18 AC (27.63%)

LEGAL

LOTS 46, 47, 48 AND 49,
SUBDIVISION OF LOTS 1 AND 2,
IRREGULAR SURVEY NE ¼ NE ¼
SECTION 28-63-8

ZONING AND USE

EXISTING ZONING: C-2
EXISTING USE: VACANT LOT
PROPOSED ZONING: C-2
PROPOSED USE: RESTAURANT

PARKING REQUIREMENTS (PROPOSED LOT 1)

REQUIRED: 10 SPACE PER 1000 SQ. FT. GFA
2,948 SQ. FT.=29.48
29 STALLS REQUIRED
ADA STALLS REQUIRED=2

PROVIDED: 26 PARKING STALLS
INCLUDES 2 ADA PARKING STALLS

PARKING REDUCTIONS (UP TO 5 TOTAL):
-UP TO 3 PARKING SPACES MAY BE WAIVED BY THE ZONING
ADMINISTRATOR FOR EACH APPROVED DRIVEWAY CONNECTION BETWEEN
ADJOINING PARKING LOTS UNDER DIFFERENT OWNERSHIP. (UP TO 3 SPACES)

-5% REDUCTION FOR BUILDING WITHIN 500' OF A BUS ROUTE (1 SPACE)
-5% REDUCTION IF BUILDING OR USE IS WITHIN ONE-QUARTER (1/4) MILE
OF A RECREATIONAL TRAIL OR BIKE ROUTE AND ON-SITE ACCESS
IS PROVIDED TO PEDESTRIAN WALKWAY (1 SPACE)

TOTAL SITE PARKING REQUIRED=24 STALLS (2 ACCESSIBLE)
PARKING PROVIDED=26 STALLS (2 ACCESSIBLE)

Contact Person	BRENT W. JACKMAN
Telephone Number	(319) 362-9548
Fax Number	(319) 362-7595
Mailing Address	1860 BOYSON ROAD
E-Mail Address	brent@halleng.com
Date Submitted	07/17/15 POI
Date Submitted	08/10/15 POI
Date Submitted	09/21/15 POI

UTILITY LEGEND

EXISTING	PROPOSED
(SS)	SANITARY SEWER
(ST)	STORM SEWER
(WB)	SUBDRAIN
(G)	FORCE MAIN
(S)	WATER MAIN W/SIZE
(OHE)	GAS
(E)	STEAM
(C)	ELECTRIC-OVERHEAD
(OHC)	ELECTRIC-UNDERGROUND
(OHT)	CABLE TV-UNDERGROUND
(F)	CABLE TV-OVERHEAD
(OHF)	TELEPHONE-OVERHEAD
(T)	FIBER OPTIC-UNDERGROUND
(T)	FIBER OPTIC-OVERHEAD
(T)	TELEPHONE-UNDERGROUND
(T)	FENCE LINE
(FP)	SILT FENCE
(FW)	FLOODPLAIN LIMITS
(CORP)	FLOODWAY LIMITS
800	CITY CORPORATION LIMITS
800	CONTOUR LINE
800	LIGHT POLE W/O MAST
800	LIGHT POLE W/MAST
800	TELEPHONE POLE
800	POWER POLE
800	GUY ANCHOR
800	GUY POLE
800	TELEPHONE PEDESTAL
800	TELEPHONE MANHOLE
800	CABLE TV PEDESTAL
800	UTILITY/CONTROL CABINET
800	SANITARY MANHOLE
800	STORM MANHOLE
800	GRATE INTAKE
800	RA-3 INTAKE
800	RA-5 INTAKE
800	RA-6 INTAKE
800	RA-8 INTAKE
800	HORSESHOE CATCH BASIN W/O FLUME
800	HORSESHOE CATCH BASIN W/FLUME
800	GAS VALVE
800	FLARED END SECTION
800	CLEANOUT, STORM OR SANITARY
800	TRAFFIC SIGNAL W/MAST

NOTE: THIS IS A STANDARD LEGEND. SOME ITEMS MAY NOT APPEAR ON DRAWINGS.

UTILITY LEGEND (CONTINUED)

EXISTING	PROPOSED
BM	BOLLARD
SB	BENCHMARK
SB	STREET SIGN
SB	WELL
SB	SOIL BORING
SB	FIRE HYDRANT
SB	WATER VALVE
SB	WATER SHUTOFF
SB	WATER BLOWOFF
SB	SURVEY CONTROL MONUMENT AS NOTED

SURVEY LEGEND

○	SET REBAR W/CAP NO.
□	SET PK NAIL
●	FOUND SURVEY MONUMENT AS NOTED
△	FOUND RIGHT OF WAY RAIL
△	SECTION CORNER SET AS NOTED
△	SECTION CORNER FOUND AS NOTED
△	CUT "X" IN CONCRETE
△	RECORDED AS
△	EASEMENT LINE
△	PLAT OR SURVEY BOUNDARY
△	PLAT LOT LINE
△	CENTERLINE
△	SECTION LINE
△	1/4 SECTION LINE
△	1/4-1/4 SECTION LINE
△	EXISTING LOT LINE
△	BUILDING SETBACK LINE

PLANT LEGEND

EXISTING	
○	DECIDUOUS TREE
○	CONIFEROUS TREE
○	DECIDUOUS SHRUB
○	CONIFEROUS SHRUB
○	TREE STUMP
○	TREE LINE DRIP EDGE

NOTE

THE PROPOSED IMPROVEMENTS INCLUDED IN THESE DRAWINGS HAVE BEEN
DESIGNED IN ACCORDANCE WITH THE CEDAR RAPIDS METROPOLITAN AREA
DESIGN STANDARDS MANUAL.

BENCHMARKS:

BM # 1: POINT# 1 5/8" REBAR CAP # 17565 SW CORNER OF LOT
N: 3481328.0649 E: 5427199.4959 ELEVATION=841.85

HORIZONTAL CONTROL:

CP # 1: POINT # 8 5/8" REBAR ON NW CORNER OF SITE
N: 3481565.8530 E: 5427371.1583 ELEVATION=846.31

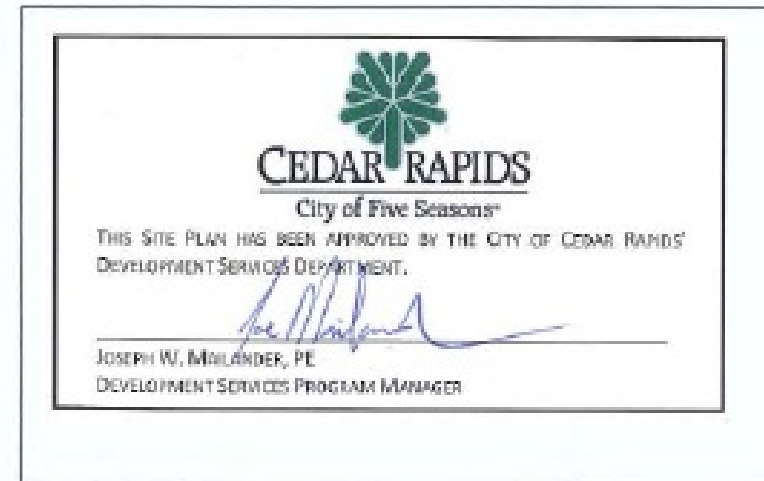


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I hereby certify that this engineering document was prepared by
me or under my direct personal supervision and that I am a duly
licensed Professional Engineer under the laws of the State of Iowa.
Signed: *Brent W. Jackman* Date: *9-21-15*
Brent W. Jackman, P.E. 18193
My license renewal date is December 31, *2016*
Pages or sheets covered by this seal: *C1.0 - C10.0*



CITY FILE NUMBER: ASDP-020488-2015
HALL AND HALL PROJECT NUMBER: 10286-1



TREE REMOVAL INCLUDES STUMP
AND ROOT REMOVAL



BUILDING REMOVAL LIMITS
REMOVAL OF BUILDINGS SHALL
INCLUDE THE REMOVAL OF ALL
FOUNDATIONS/FOOTINGS AND ALL
UNDERGROUND UTILITIES WITHIN
THE FOOT PRINT OF THE BUILDING
BEING REMOVED



NOTE:

ALL UTILITY REMOVALS SHALL BE IN ACCORDANCE WITH CEDAR RAPIDS METRO SPECIFICATIONS.

UTILITY REMOVAL COORDINATION:

CONTRACTOR SHALL COORDINATE UTILITY REMOVALS FOR ELECTRICAL (INCLUDING THE TRANSFORMER) GAS AND TELEPHONE WITH THE UTILITY COMPANY PRIOR TO REMOV



CEDAR RAPIDS
City of Five Seasons

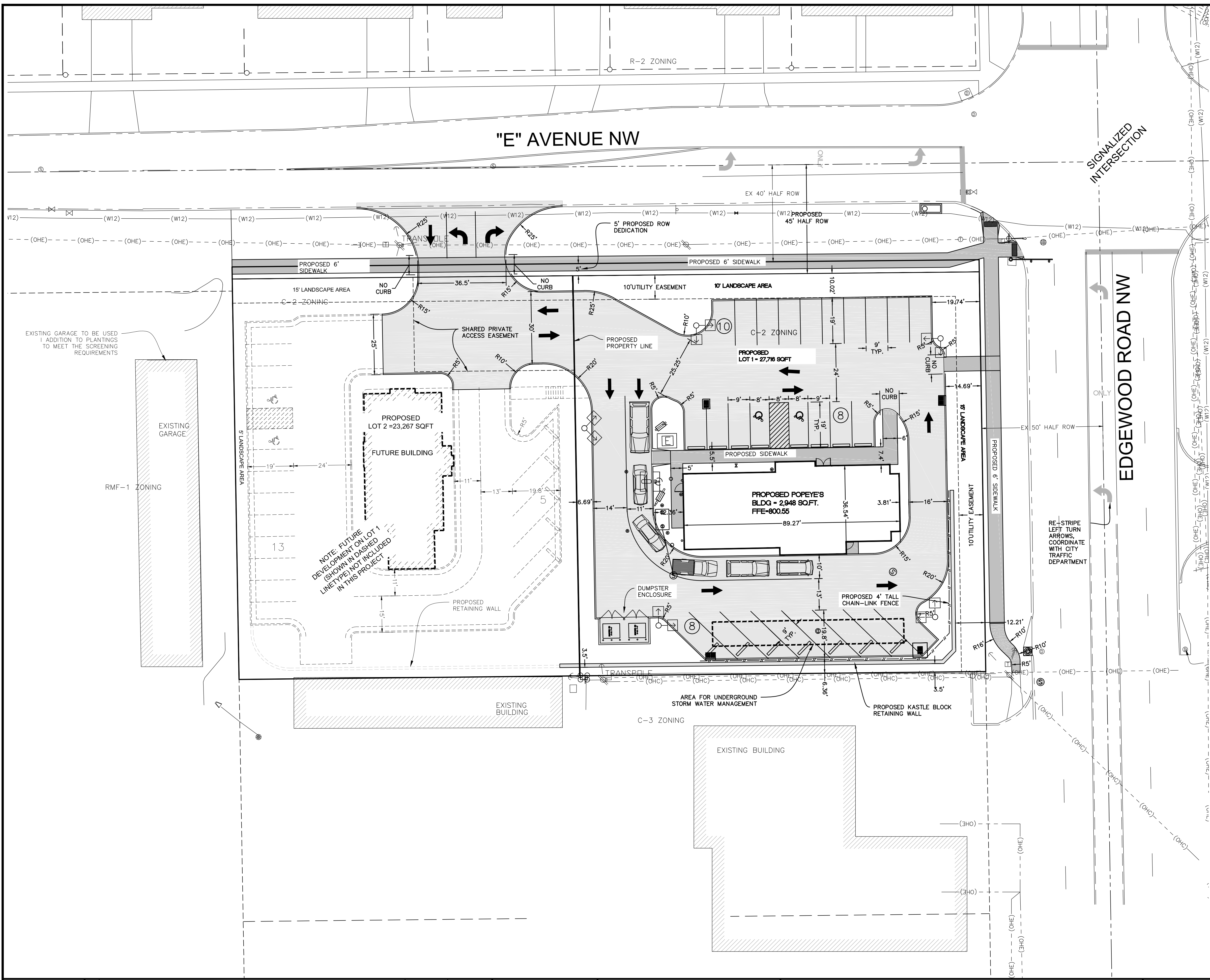


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for JEFF BRAVERMAN & SCOTT AKER.

SHEET

C2.0

PROJECT NO: 10286



DRAWN BY: DAS					
CHECKED BY: BWJ					
APPROVED BY: BWJ					
DATE: 09/21/15					
FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE	



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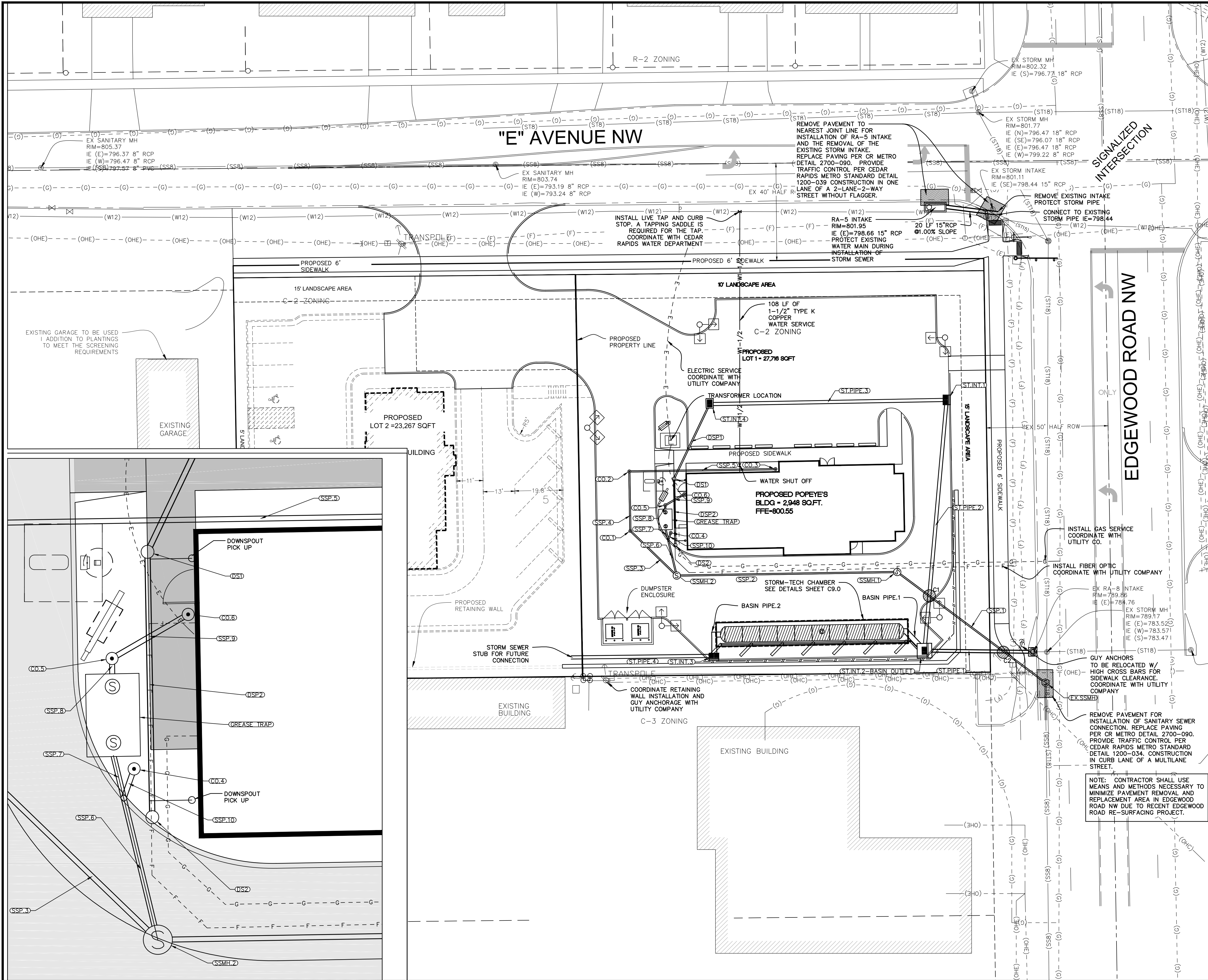
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for JEFF BRAVERMAN & SCOTT AKERS

SITE LAYOUT PLAN

PROJECT NO: 10286

SHEET
C3.0



UTILITY CONFLICTS

C1
SANITARY SEWER TOP OF PIPE=785.36
IE STORM SEWER=791.80

C2
SANITARY SEWER TOP OF PIPE=783.23
IE STORM SEWER=785.27

GRAPHIC SCALE IN FEET
SCALE 1"=20'

0 10 20 30 40

SANITARY SEWER Structure Table		
Structure Name	Structure Details	Location
CO.1	RIM = 799.31 SSP.4 INV IN = 793.66 SSP.3 INV OUT = 793.66	N: 3460104.3747 E: 5406130.8460
CO.2	RIM = 799.79 SSP.5 INV IN = 793.90 SSP.4 INV OUT = 793.90	N: 3460128.8299 E: 5406130.4127
CO.3	RIM = 800.53 SSP.5 INV OUT = 794.50	N: 3460129.7778 E: 5406190.5085
CO.4	RIM = 800.08 SSP.10 INV OUT = 794.29	N: 3460103.5669 E: 5406147.4418
CO.5	RIM = 800.22 SSP.9 INV IN = 794.46 SSP.8 INV OUT = 794.46	N: 3460114.9155 E: 5406145.1755
CO.6	RIM = 800.51 SSP.9 INV OUT = 794.55	N: 3460119.4506 E: 5406152.9988
EX.SSMH	RIM = 788.44 SSP.1 INV IN = 781.42 EX.SS.PIPE INV OUT = 780.42	N: 3460041.9732 E: 5406301.4609
GREASE TRAP	RIM = 800.17 SSP.8 INV IN = 794.44 SSP.7 INV OUT = 794.34	N: 3460109.0913 E: 5406145.2783
SSMH.1	RIM = 799.25 SSP.2 INV IN = 787.81 SSP.1 INV OUT = 785.81	N: 3460087.4698 E: 5406240.5354
SSMH.2	RIM = 798.77 SSP.6 INV IN = 793.50 SSP.3 INV OUT = 793.30	N: 3460085.9957 E: 5406149.8880

SANITARY SEWER Pipe Table					
Pipe Name	Size	Length	Slope	Structure	Material
SSP.1	6.00	76.04	5.77%	EX.SSMH 781.42	SSMH.1 785.81 PVC PIPE SDR 23.5
SSP.2	6.00	90.66	6.06%	SSMH.1 787.81	SSMH.2 793.30 PVC PIPE SDR 23.5
SSP.6	6.00	14.98	4.33%	SSMH.2 793.50	WYE 794.15 PVC PIPE SDR 23.5
SSP.8	6.00	1.58	1.00%	GREASE TRAP 794.44	CO.5 794.46 PVC PIPE SDR 23.5
SSP.9	6.00	9.04	1.00%	CO.5 794.46	CO.6 794.55 PVC PIPE SDR 23.5
SSP.5	6.00	60.10	1.00%	CO.3 794.50	CO.2 793.90 PVC PIPE SDR 23.5
SSP.4	6.00	24.46	1.00%	CO.2 793.90	CO.1 793.66 PVC PIPE SDR 23.5
SSP.3	6.00	26.46	1.00%	CO.1 793.66	SSMH.2 793.40 PVC PIPE SDR 23.5
SSP.10	6.00	3.19	4.33%	WYE 794.15	CO.4 794.29 PVC PIPE SDR 23.5
SSP.7	6.00	4.41	4.31%	GREASE TRAP 794.34	WYE 794.15 PVC PIPE SDR 23.5
EX.SS.PIPE	8.00	15.41	7.00%	EX.SSMH 780.42	779.34 PVC PIPE SDR 23.5

STORM SEWER Structure Table		
Structure Name	Structure Details	Location
DS1	FG= 800.39 DSP2 INV IN = 796.59 DSP1 INV OUT = 796.59	N: 3460125.8816 E: 5406148.8243
DS2	FG= 799.69 DSP2 INV OUT = 797.00	N: 3460098.5945 E: 5406149.3188
ST.INT.1 CURB AND GRATE	TOP CURB=799.71 GUTTER=799.21 ST.PIPE.3 INV IN = 794.24 ST.PIPE.2 INV OUT = 794.14	N: 3460158.2497 E: 5406260.8520
ST.INT.2-BASIN INTAKE 2X3 AREA INTAKE SEE DETAIL SHEET C9.0	RIM = 797.67 ST.PIPE.2 INV IN = 791.11 SUBRAIN INV IN = 790.06 BASIN.PIPE.1 INV OUT = 790.81 ST.PIPE.1 INV OUT = 786.00	N: 3460055.1308 E: 5406251.7354
ST.INT.3 CURB AND GRATE	TOP CURB=798.31 GUTTER=797.81 ST.PIPE.4 INV IN = 791.00 BASIN.PIPE.2 INV OUT = 790.81	N: 3460052.5959 E: 5406165.2076
ST.INT.4 2X3 AREA INTAKE	RIM = 799.72 DSP1 INV IN = 796.08 ST.PIPE.3 INV OUT = 795.21	N: 3460156.8199 E: 5406163.4224

STORM SEWER Pipe Table					
Pipe Name	Size	Length	Slope	Structure	Material
ST.PIPE.4	15.00	58.69	1.00%	ST.INT.3 791.00	791.59 HDPE PIPE ADS N-12
DSP2	6.00	27.29	1.50%	DS1 796.59	DS2 797.00 HDPE PIPE ADS N-12
DSP1	6.00	33.94	1.50%	DS1 796.59	ST.INT.4 796.08 HDPE PIPE ADS N-12
ST.PIPE.3	15.00	97.44	1.00%	ST.INT.1 794.24	ST.INT.2 795.21 HDPE PIPE ADS N-12
ST.PIPE.1	12.00	44.50	2.25%	ST.INT.2-BASIN OUTLET 786.00	STRC 39 785.00 CONCRETE PIPE CLASS III
ST.PIPE.2	15.00	103.52	2.93%	ST.INT.1 794.14	ST.INT.2-BASIN OUTLET 791.11 HDPE PIPE ADS N-12

DRAWN BY: DAS

CHECKED BY: BWJ

APPROVED BY: BWJ

DATE: 09/21/15

FIELD BOOK: XXX

NO.

REVISION DESCRIPTION

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DATE

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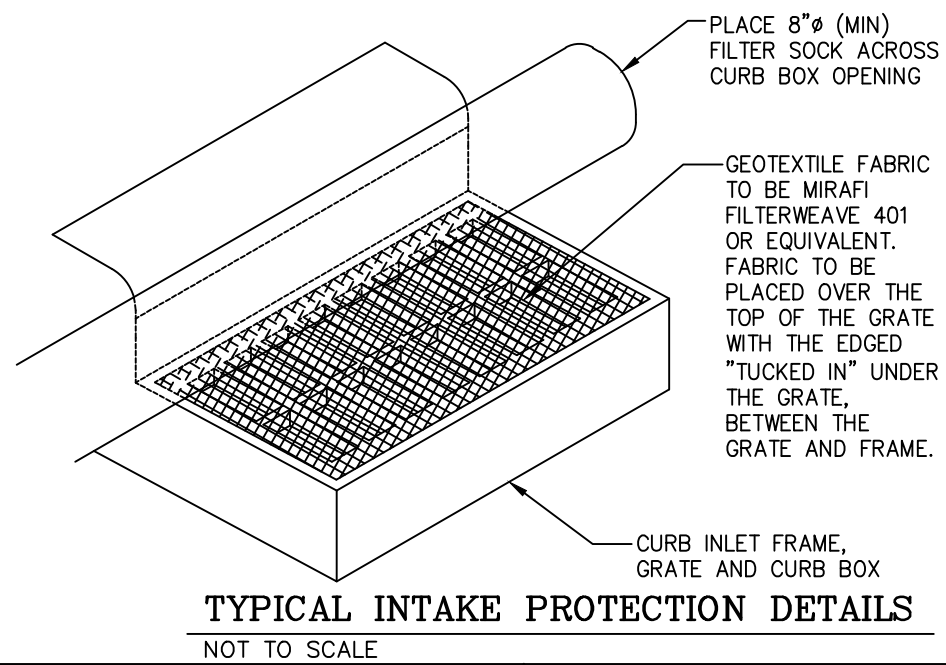
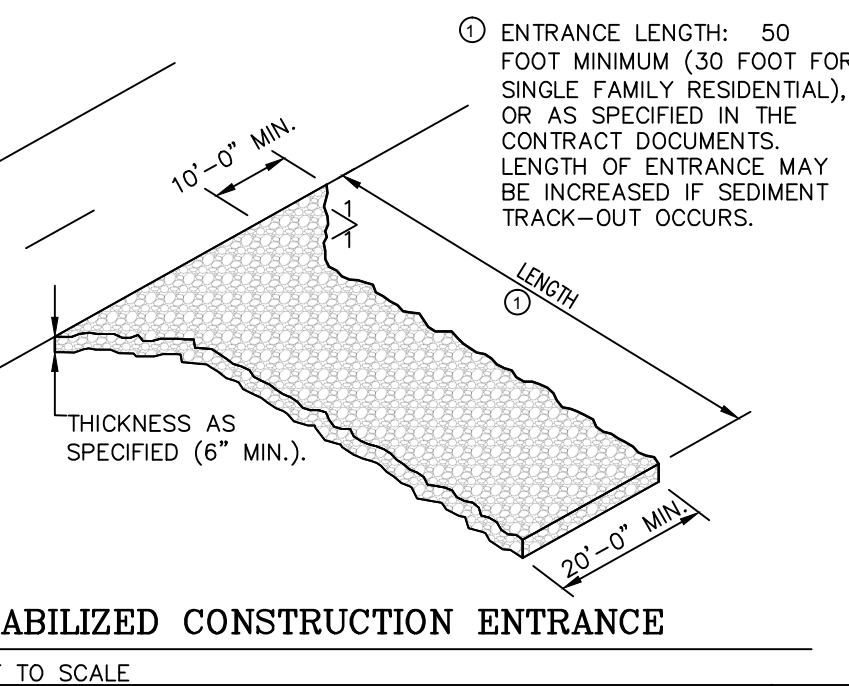
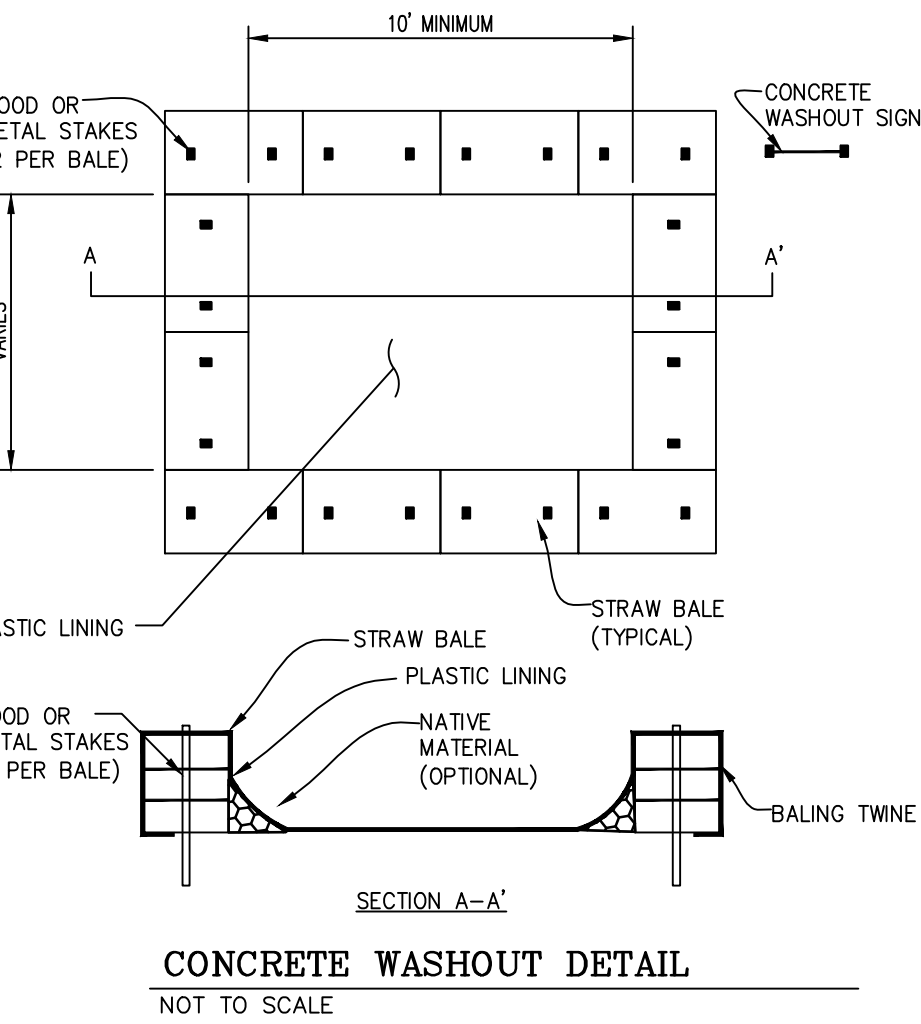
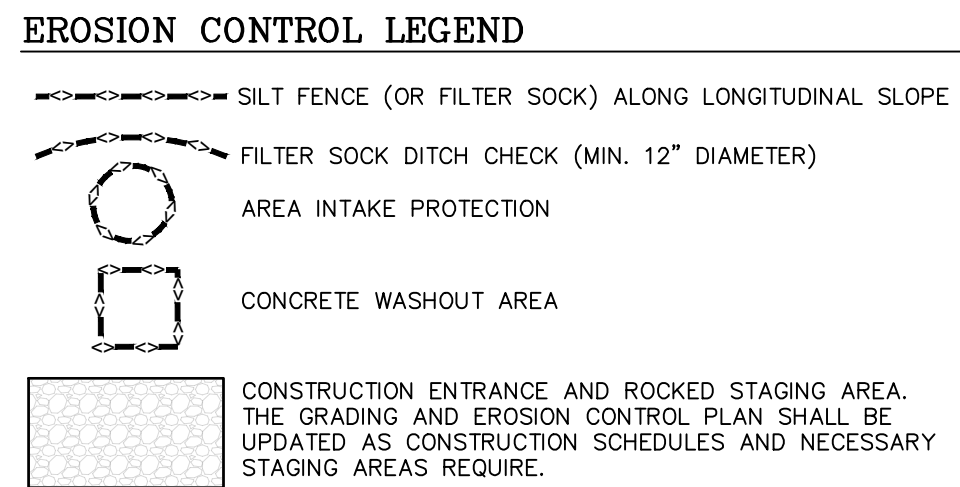
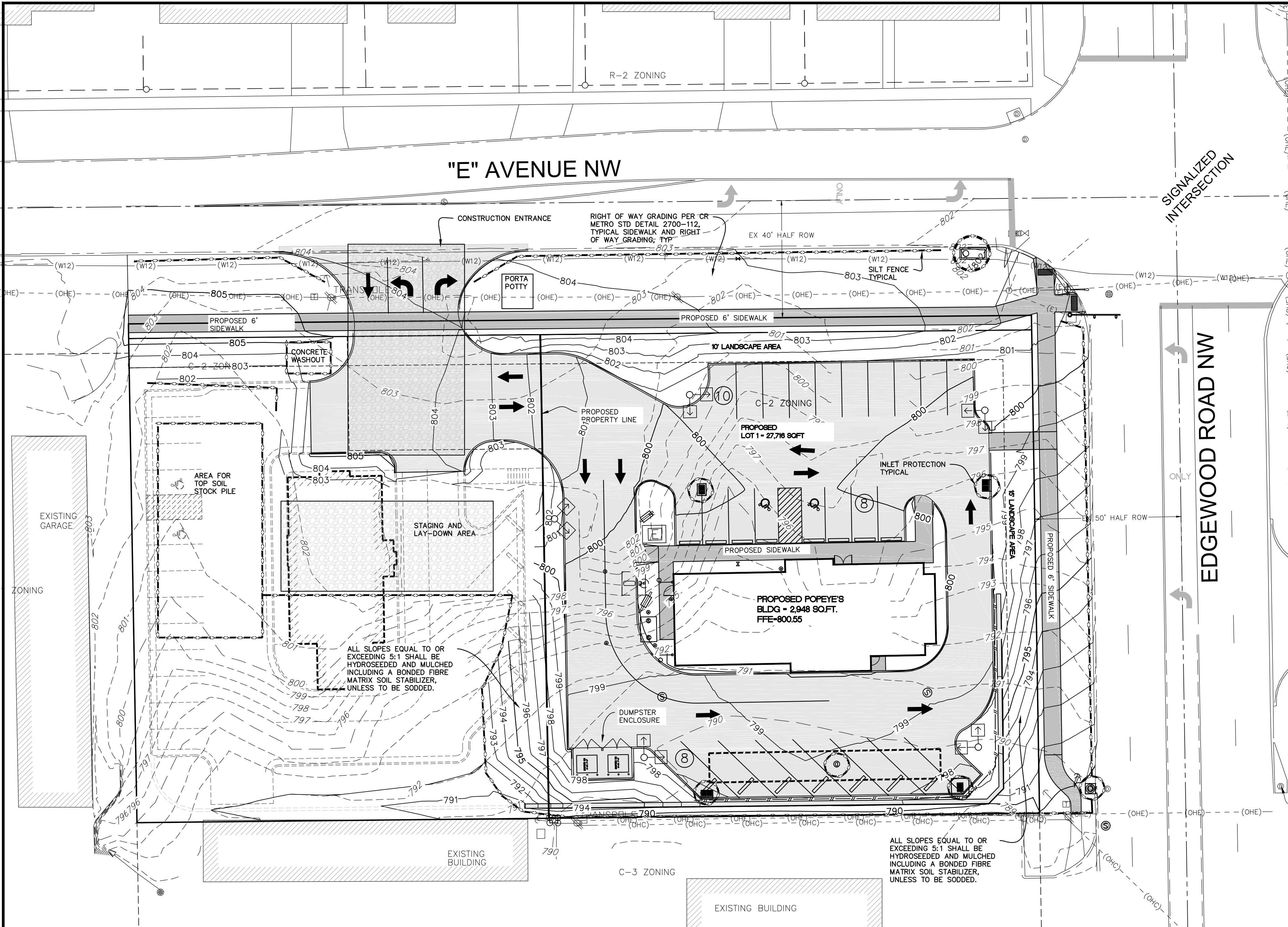
for JEFF BRAVERMAN & SCOTT AKERS

SHEET

C4.0

PROJECT NO: 10286

CAD File: I:\Projects\10200\10286-1 Popeyes-Edgewood Rd.E Ave DWG\FOI\10286-1-801.dwg Date Plotted: Sep 21, 2015 - 12:03pm Plotted By: BRENT JACKMAN



EROSION CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED PER THE APPROVED PLAN AND DETAILS/SPECIFICATIONS, PER THE STORM WATER POLLUTION PREVENTION PLAN AND AS DEEMED NECESSARY BY THE JURISDICTIONAL ENGINEER.
- PERIMETER EROSION CONTROL METHODS SHALL BE IN PLACE PRIOR TO AREAS BEING DISTURBED.
- EROSION CONTROL DEVICES SHALL BE CHECKED BY THE GENERAL CONTRACTOR EVERY SEVEN (7) DAYS AND AFTER EACH RAINFALL EVENT EQUAL TO 1/2" OR GREATER TO ENSURE WORKING ORDER.
- REPAIRS TO SOIL EROSION CONTROL DEVICES DEEMED NECESSARY SHALL BE COMPLETED IMMEDIATELY UPON NOTIFICATION OR WITHIN 24 HOURS IF WEATHER DELAYS.
- THE CONTRACTOR SHALL STRIP AND STOCKPILE THE TOPSOIL, AND RESPREAD THE TOPSOIL IN ACCORDANCE WITH THE LANDSCAPE PLAN FOR FINISHED GRADE WORK. ANY EXCESS TOPSOIL TO BE DISPOSED OF PER APPLICABLE REGULATIONS AND OWNER'S DISCRETION.
- WHEN CONSTRUCTION ACTIVITIES ARE COMPLETE, RESPREAD TOPSOIL OVER THE DISTURBED SITE PER THE LANDSCAPE PLAN. THEN PROVIDE SEEDING OR SODDING PER THE PROPOSED LANDSCAPING PLAN.
- PROVIDE TEMPORARY SEEDING IN DISTURBED AREAS WHERE OPERATIONS WILL NOT COMMENCE OR PERMANENT SEEDING WILL NOT BE COMPLETED FOR A PERIOD OF 7 DAYS OR MORE.
- SILT FENCES, IF USED, SHALL BE INSTALLED PER DETAIL AS SHOWN ON IN THE PLAN. ADDITIONAL SILT FENCE SHALL BE INSTALLED AS NECESSARY BY THE CONTRACTOR. MAINTENANCE AND/OR REPLACEMENT OF THE SILT FENCE IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL TEMPORARY SILT FENCE, COMPOST SOCKS OR EQUIVALENT AROUND ALL INTAKES. EROSION CONTROL SOCKS OR EQUIVALENT SHALL BE USED AT STREET INTAKES ONCE THE STREET PAVING HAS BEEN COMPLETED. EROSION SOCKS SHALL BE MAINTAINED UNTIL THE SITE HAS BEEN STABILIZED.
- THE DETAILS SHOWN HEREIN DESCRIBES VARIOUS METHODS OF CONSTRUCTION WHICH MAY BE REQUIRED FOR THE CONTROL OF SILTATION ON THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCOMPLISHING THE REQUIRED CONSTRUCTION WORK ON THIS PROJECT IN SUCH A MANNER AS TO EFFECTIVELY MINIMIZE AND CONTROL THE WATER POLLUTION WHICH MIGHT BE CAUSED BY SOIL EROSION FROM THE PROJECT. IT IS INTENDED THAT THESE FEATURES BE MAINTAINED IN APPROPRIATE FUNCTIONAL CONDITION FROM INITIAL CONSTRUCTION STAGES TO FINAL COMPLETION OF PROJECT.
- IN ADDITION TO THE DETAILS SHOWN, OTHER PROVISIONS FOR CONTROLLING EROSION MAY BE INCORPORATED INTO THE PROJECT WORK.
- CONTRACTOR TO REGULARLY CLEAN STREETS/DRIVES OF SOIL TRACKED FROM SITE WITHIN A PERIOD OF 24 HOURS.

- CONTRACTOR SHALL PROTECT ROW AND COORDINATE ANY WORK AFFECTING NEIGHBORING PROPERTIES.
- PROVIDE SILT FENCE OR EQUIVALENT AT ALL AREAS WHERE EROSION MAY BE POSSIBLE TO LEAVE SITE BASED ON CONTRACTORS CONSTRUCTION ACTIVITIES.
- ALL MATERIALS HAULED OFF-SITE SHALL BE SECURED TO PREVENT LITTERING

NOTICE:

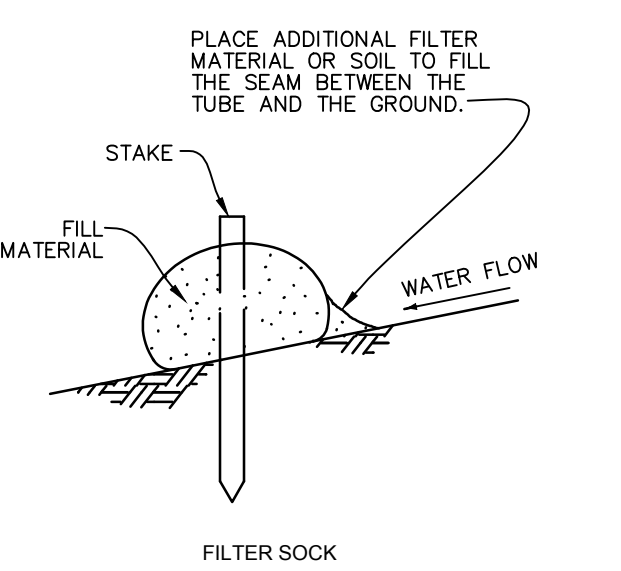
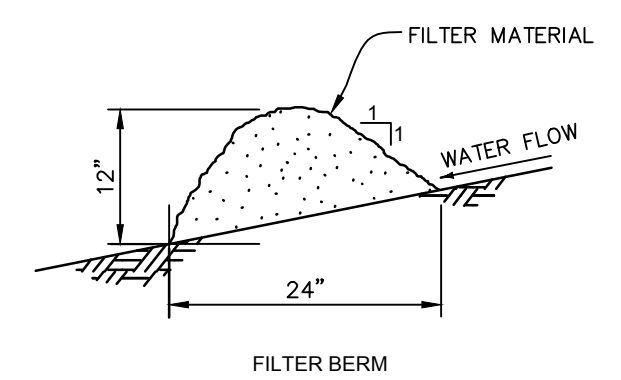
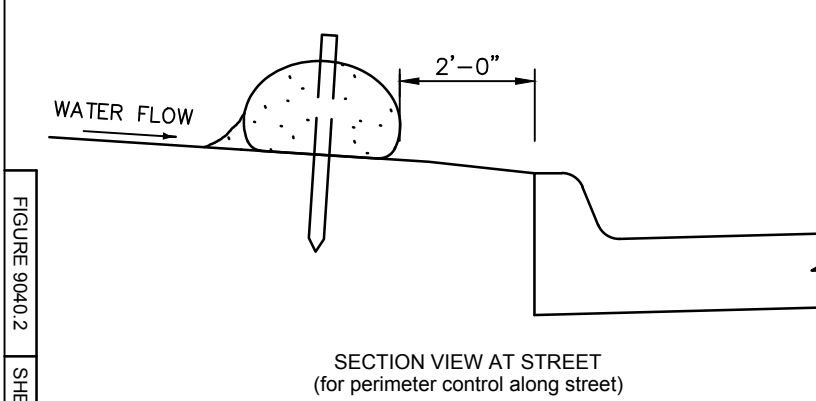
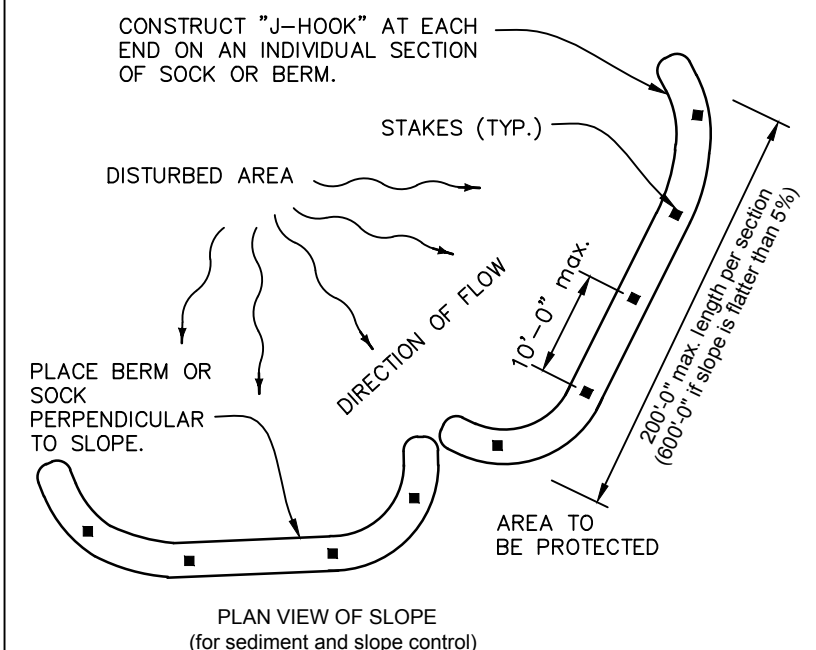
THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES FROM THE DATE CONSTRUCTION ACTIVITIES BEGIN TO THE DATE OF FINAL STABILIZATION. ALL OPERATORS/CONTRACTORS WORKING ONSITE MUST SIGN THE CERTIFICATION STATEMENT PROVIDED AND WILL BECOME CO-PERMITTEES ON THE NPDES GENERAL PERMIT NO. 2 FOR THIS SITE. ALL OPERATORS/CONTRACTORS WORKING ONSITE SHALL BE SUPPLIED A COPY OF THE SWPPP AND MUST BE FAMILIAR WITH ITS CONTENTS. THE SWPPP MUST BE PERIODICALLY UPDATED TO SHOW CURRENT EROSION CONTROL PRACTICES. UPDATED VERSIONS OF THE SWPPP WILL BE PROVIDED TO ALL OF THE OPERATORS/CONTRACTORS WHOM ARE AFFECTED BY THE CHANGES MADE TO THE SWPPP. IT WILL BE THE DUTY OF THE PERMITTEE (OWNER OR GENERAL CONTRACTOR) TO SEE THAT THESE REQUIREMENTS ARE MET.

THE EROSION CONTROL PLAN SHALL BE UPDATED AS CONDITIONS AND/OR CONTROL LOCATIONS CHANGE.

IF CONTROL LOCATIONS CANNOT BE PRE-DETERMINED, THE SWPPP MANAGER SHALL ADD THEM TO THE EROSION CONTROL PLAN AS THEY ARE IMPLEMENTED.

THE FOLLOWING CONTROLS SHALL BE ADDED TO THE GRADING AND EROSION CONTROL BY THE SWPPP MANAGER AS THEY ARE IMPLEMENTED:

- CONSTRUCTION PARKING
- HAZARDOUS MATERIAL/CHEMICAL STORAGE
- GARBAGE/RECYCLING FACILITIES
- JOB TRAILER LOCATION



BERM SHOWN IS TYPICAL FOR SLOPES FLATTER THAN 3:1. FOR STEEPER SLOPES, INCREASE BERM SIZE AS DIRECTED BY THE ENGINEER.

PLACE BERM IN UNCOMPACTED WINDROW PERPENDICULAR TO THE SLOPE AT LOCATIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

FILTER SOCK DIAMETER AS SPECIFIED IN THE CONTRACT DOCUMENTS.

DRAWN BY: DAS					
CHECKED BY: BWJ					
APPROVED BY: BWJ					
DATE: 09/21/15					
FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE	



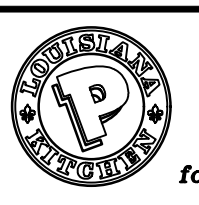
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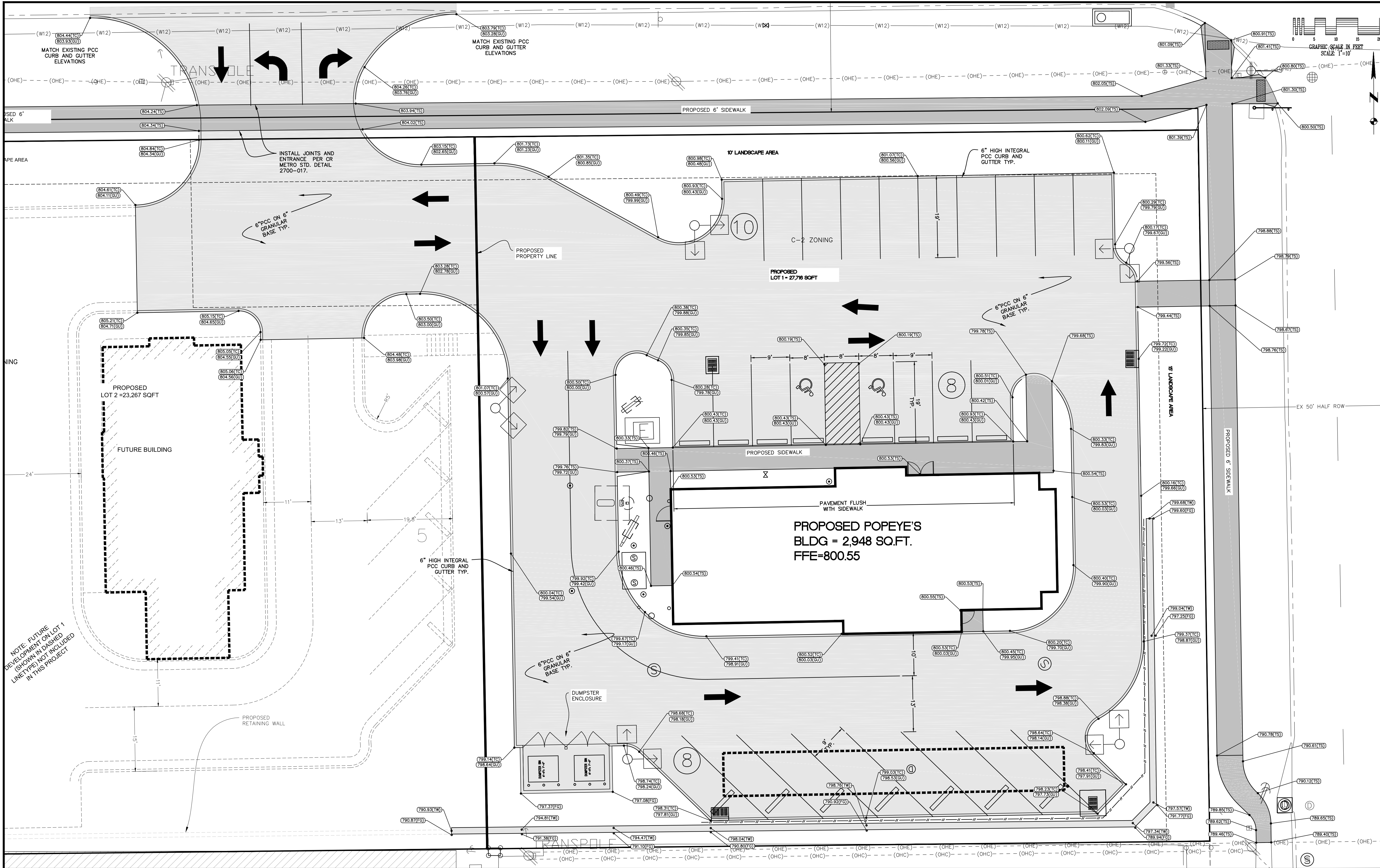
POPEYE'S
NEW FACILITY
3401 E AVENUE NW, CEDAR RAPIDS, IOWA
for JEFF BRAVERMAN & SCOTT AKERS

SITE GRADING AND EROSION CONTROL PLAN

FILTER BERM AND FILTER SOCK

SHEET
C5.0

PROJECT NO: 10286



DRAWN BY:	DAS				
CHECKED BY:	BJW				
APPROVED BY:	BJW				
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SITE PAVING PLAN

PROJECT NO: 10286

SHEET

C6.0

CAD File: I:\Projects\10286-1 Popeyes-Edgewood Rd.E Ave DWG\FOI\10286-1-801.dwg Date Plotted: Sep 21, 2015 12:05pm Plotted By: BRENT JACKMAN

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, LATEST EDITION, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THIS DRAWING ARE APPROXIMATE ONLY AND WERE OBTAINED FROM PLANS OF RECORD. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN AND MAY NOT SHOWN ON THIS DRAWING.
3. NOTIFY UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT CRITICAL LOCATIONS TO VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION.
5. IOWA CODE 480, UNDERGROUND FACILITIES INFORMATION, REQUIRES VERBAL NOTICE TO IOWA ONE—CALL 1—800—292—8989, NOT LESS THAN 48 HOURS BEFORE EXCAVATING, EXCLUDING WEEKENDS AND HOLIDAYS.
6. NOTIFY THE APPROPRIATE GOVERNING AUTHORITY 48 – 72 HOURS PRIOR TO BEGINNING CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY. THE CITY OF CEDAR RAPIDS, IOWA SHALL BE THE PUBLIC AGENCY RESPONSIBLE FOR INSPECTION DURING CONSTRUCTION OF THE PUBLIC PORTIONS OF THE PROJECT.
7. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
8. PROVIDE TRAFFIC AND PEDESTRIAN CONTROL MEASURES (SIGNS, BARRICADES, FLAGGERS, ETC.) IN COMPLIANCE WITH PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION AND THE CITY OF CEDAR RAPIDS STANDARDS.
9. ADJUST ALL VALVES, MANHOLES, CASTINGS, GAS VENTS, ETC., TO MATCH THE NEW SURFACE (IF APPLICABLE). ADJUSTMENT SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO THE CONSTRUCTION. AT NO ADDITIONAL COST TO THE OWNER, REPAIR ANY DAMAGE TO SAID STRUCTURES AND APPURTENANCES THAT OCCUR DURING CONSTRUCTION.
10. CONTRACTOR SHALL REFER TO BUILDING PLANS FOR BUILDING DIMENSIONS, STOOP SIZES AND LOCATIONS, AND BUILDING UTILITY ENTRANCE LOCATIONS, SIZES, AND ELEVATIONS.
11. REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.

SITE PREPARATION NOTES

1. PROTECT ADJACENT PROPERTY DURING DEMOLITION.
2. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
3. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO EASEMENTS OR RIGHTS SHALL BE PLACED WITHIN THE EASEMENTS UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE ENGINEER. DISPOSAL SITES MUST BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND TEMPORARY HAUL ROADS TO PREVENT THE SPREAD OF DUST. OFF—SITE DISPOSAL SHALL BE IN ACCORDANCE WITH THE APPLICABLE GOVERNMENTAL REGULATIONS.
4. KEEP ADJACENT PUBLIC STREETS FREE FROM SOIL AND DEBRIS GENERATED BY THE PROJECT. CLEAN SOIL AND DEBRIS FROM THE ADJACENT STREETS ON A DAILY BASIS.
5. DURING CONSTRUCTION, CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS.
6. REMOVAL OR ABANDONMENT OF PUBLIC UTILITIES SHALL BE FULLY COORDINATED WITH APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES.
7. ANY EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) THAT THE CONTRACTOR'S OPERATIONS DAMAGE SHALL BE REPAIRED BY THAT CONTRACTOR AT HIS/HER COST.
8. WHERE A SECTION OF PAVEMENT, CURB AND GUTTER OR SIDEWALK IS CUT OR OTHERWISE DAMAGED BY THE CONTRACTOR, THE ENTIRE SECTION SHALL BE REMOVED AND REPLACED. PAVEMENT, CURBS, GUTTERS AND SIDEWALKS SHALL BE REMOVED A MINIMUM OF TWO FEET BEYOND THE EDGE OF THE TRENCH CUT AND TO THE NEAREST JOINT.
9. SAWCUT EDGES OF PAVEMENT FULL DEPTH PRIOR TO REMOVAL TO PREVENT DAMAGE TO ADJACENT SLABS AND FIXTURES.
10. EXISTING FIELD TILE LINES ENCOUNTERED IN THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR IN ONE OF THE FOLLOWING WAYS:

A. CONNECT TILE TO THE NEAREST STORM SEWER, B. DAYLIGHT TO FINISHED GROUND, C. REPAIR TILE AND MAINTAIN SERVICE.
11. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF A TILE IS ENCOUNTERED AND SHALL INDICATE THE METHOD OF RESOLVING THE CONFLICT. THE ENGINEER SHALL APPROVE THE PROPOSED METHOD. THE LOCATION OF THE FIELD TILE SHALL BE RECORDED ON THE CONSTRUCTION RECORD DOCUMENTS.

GRADING NOTES

1. STRIP EXISTING VEGETATION WITHIN THE GRADING LIMITS AND AREAS TO RECEIVE FILL. STOCKPILE ON—SITE FOR REUSE IF SUITABLE.
2. PROOF ROLL ALL FILL AREAS TO IDENTIFY SOFT OR DISTURBED AREAS IN THE SUBGRADE. ALL UNSUITABLE MATERIAL IDENTIFIED SHALL BE REMOVED AND RECOMPACTED. PROOFROLL WITH 25 TON MINIMUM GROSS VEHICLE WEIGHT.
3. REMOVE AND RECOMPACT AREAS OF SUBGRADE WHICH ARE SOFT OR UNSTABLE TO MEET SPECIFIED LIMITS FOR DENSITY AND MOISTURE CONTENT.
4. SCARIFY EXISTING SUBGRADE TO A DEPTH OF 8 INCHES AND RECOMPACT TO 95% OF STANDARD PROCTOR DENSITY (ASTM D698) PRIOR TO PLACEMENT OF FILL.
5. DO NOT PLACE, SPREAD, OR COMPACT ANY FILL MATERIAL DURING UNFAVORABLE WEATHER CONDITIONS AND DO NOT RESUME COMPACTION OPERATIONS UNTIL MOISTURE CONTENT AND DENSITY OF IN—PLACE FILL MATERIAL ARE WITHIN SPECIFIED LIMITS.
6. PLACE FILL MATERIAL IN 9" MAXIMUM LIFTS.
7. FILLS PLACED BELOW LAWN AREAS SHALL BE COMPACTED TO 90% OF MATERIALS MAXIMUM STANDARD PROCTOR DRY DENSITY (ASTM D698).
8. SCARIFY SUBGRADE TO DEPTH OF 3 INCHES WHERE TOPSOIL IS SCHEDULED. SCARIFY AREAS WHERE EQUIPMENT USED FOR HAULING AND SPREADING TOPSOIL HAS CAUSED COMPACTED SUBSOIL.
9. FILL MATERIAL OBTAINED FROM OFF—SITE SOURCES SHALL BE SOIL OR SOIL AND ROCK MIXTURE FREE FROM ORGANIC MATTER AND OTHER DELTERIOUS SUBSTANCES. IT SHALL CONTAIN NO ROCKS OR LUMPS OF 6 INCHES IN GREATEST DIMENSION AND NOT MORE THAN 15% OF THE ROCKS OR LUMPS SHALL BE LARGER THAN 2—1/2 INCHES IN GREATEST DIMENSION.
10. SCARIFY AND RECOMPACT THE TOP 9" OF SUBGRADE IN ALL CUT AREAS AFTER ROUGH GRADING IS COMPLETED. COMPACT THE ENTIRE PAVING AND BUILDING SUBGRADE TO 95% STANDARD PROCTOR DRY DENSITY TO WITHIN 1.0' OF FINAL SUBGRADE. THE FINAL 1.0' OF FILL TO BE COMPACTED TO 98% STANDARD PROCTOR DRY DENSITY (ASTM D698).
11. IN AREAS TO RECEIVE ADDITIONAL FILL OVER EXISTING FILL MATERIALS. REMOVE TOP 12" OF MATERIAL AND SCARIFY AND RECOMPACT THE NEXT 9" OF RESULTING SUBGRADE. COMPACT RESULTING SUBGRADE TO 95% STANDARD PROCTOR DRY DENSITY. SUBSEQUENT FILL TO BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY TO WITHIN 1.0' OF FINAL SUBGRADE. THE FINAL 1.0' OF FILL TO BE COMPACTED TO 98% STANDARD PROCTOR DRY DENSITY (ASTM D698).
12. FILL PLACED WITHIN THE BUILDING AREA AND IN AREAS TO BE PAVED SHOULD CONSIST OF APPROVED MATERIALS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS. THE FILL SHOULD BE PLACED AND COMPACTED IN LIFTS OF 9 INCHES OR LESS IN LOOSE THICKNESS. FILL PLACED ABOVE SHALLOW FOOTING BASE ELEVATION FOR FLOOR SLAB SUPPORT IN THE BUILDING AREA AND MORE THAN 12 INCHES BELOW FINISHED SUBGRADE ELEVATION IN AREAS TO BE PAVED SHOULD BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY (ASTM D698). THE UPPER 12 INCHES OF SUBGRADE IN AREAS TO BE PAVED AND FILL PLACED BELOW SHALLOW FOOTING BASE ELEVATION IN THE BUILDING AREA SHOULD BE COMPACTED TO AT LEAST 98% STANDARD PROCTOR DRY DENSITY (ASTM D—698). THE HIGHER DEGREE OF FILL COMPACTION BELOW FLOORINGS IN THE BUILDING AREAS SHOULD EXTEND LATERALLY BEYOND THE EXTERIOR EDGES OF PERIMETER FOOTINGS AT LEAST 8 INCHES PER FOOT BELOW FOOTING BASE ELEVATION.
13. FINISH CONTOURS SHOWN ARE TO TOP OF PAVEMENT OR TO TOP OF STOOPIL.
14. CONTRACTOR SHALL GRADE GRASSED AREAS, BETWEEN FACE OF BUILDING AND BACK OF WALK, TO DRAIN TO YARD DRAINS WITH POSITIVE DRAINAGE AWAY FROM BUILDINGS.

TRENCH, BEDDING, AND BACKFILL NOTES

1. TRENCH WIDTH REQUIREMENTS BELOW THE TOP OF THE PIPE SHALL NOT BE LESS THAN 12 INCHES NOR MORE THAN 18 INCHES WIDER THAN OUTSIDE SURFACE OF ANY PIPE, CONDUIT OR CABLE, AND SHALL BE THE LEAST PRACTICAL WIDTH THAT WILL ALLOW FOR COMPACTION OF TRENCH BACKFILL.
2. TRENCH STABILIZATION MATERIAL IF REQUIRED SHALL BE CRUSHED ROCK OR OTHER APPROVED MATERIAL WITH 100% PASSING THE 3" SIEVE AND 25%—95% PASSING THE 1" SIEVE. THIS MATERIAL SHALL HAVE A MAXIMUM FREE—THAW LOSS OF 15% WHEN TESTED IN ACCORDANCE WITH LABORATORY TEST METHOD 211, METHOD C. THE PLASTICITY INDEX SHALL NOT EXCEED 5.
3. ACCURATELY GRADE TRENCH BOTTOM TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF PIPE ON BEDDING MATERIAL AT EVERY JOINT ALONG ENTIRE LENGTH, EXCEPT WHERE NECESSARY TO EXCAVATE FOR BELL HOLES, PROPER SEALING OR PIPE JOINTS OR OTHER REQUIRED CONNECTIONS. DIG BELL HOLES AND DEPRESSIONS FOR JOINTS AFTER TRENCH BOTTOM HAS BEEN GRADED. DIG NO DEEPER, LONGER, OR WIDER THAN NEEDED TO MAKE PROPER JOINT CONNECTION.
4. ALL TRENCH EXCAVATION SIDE WALLS GREATER THAN 5 FEET IN DEPTH SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED TO PROTECT THE TRENCH FROM COLLAPSE WITHIN THE TRENCH. PROTECT THE TRENCH WITH THE APPLICABLE RULES AND REGULATIONS ESTABLISHED FOR CONSTRUCTION. THE DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS (OSHA), AND BY LOCAL ORDINANCES. LATERAL TRAVEL DISTANCE TO AN EXIT LADDER OR STEPS SHALL NOT BE GREATER THAN 25 FEET IN TRENCHES 4 FEET OR DEEPER.
5. GRANULAR BEDDING AGGREGATE FOR STORM AND SANITARY PIPE SHALL MEET THE FOLLOWING GRADATION:

SIEVE SIZE: 1—1/2 1 3/4 1/2 3/8 4—20 8
% PASSING: 100 95—100 50—100 20—65 10—65 0—8
6. IF ON—SITE MATERIAL IS UNSUITABLE, UTILITY TRENCHES BENEATH PAVED SURFACES SHALL BE BACKFILLED WITH GRANULAR MATERIAL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE 1 3/4 8 30 200
% PASSING: 100 85—100 30—75 20—60 15—40 0—16
7. PLACE TRENCH AND STRUCTURE EXCAVATION BACKFILL 12 INCHES OR MORE ABOVE TOP OF PIPE IN 7 INCH MAXIMUM LIFTS AND COMPACT TO 85% STANDARD PROCTOR DRY DENSITY (ASTM D698) IN UNSURFACED AREAS AND TO 95% STANDARD PROCTOR DRY DENSITY IN SURFACED AREAS. INSTALL A MINIMUM CUSHION OF 2 FEET OF COMPACTED BACKFILL ABOVE PIPE ENVELOPE BEFORE USING HEAVY COMPACTION EQUIPMENT.
8. HAND PLACE AND COMPACT BACKFILL MATERIAL TO 12 INCHES ABOVE TOP OF PIPE TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D698) IN SURFACED AREAS AND TO 90% STANDARD PROCTOR DRY DENSITY IN UNSURFACED AREAS.
9. STORM SEWER TRENCHES MAY BE BACKFILLED WITH NATIVE EXCAVATED MATERIAL, IF SUITABLE.
10. THE CONTRACTOR SHALL MAKE PROVISIONS TO HANDLE WATER ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER'S REPRESENTATIVE OF THE PROPOSED METHOD OF DEWATERING.

PAVEMENT GENERAL NOTES

1. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
2. ALL DIMENSIONS TO BACK—OF—CURB OR EDGE OF SLAB UNLESS NOTED OTHERWISE.
3. REMOVE AND REPLACE OR RESTORE ALL STREET SIGNS, PAVEMENT MARKINGS, SIDEWALK LAMPS, SIDEWALKS, STEPS, LANDSCAPE STRUCTURES, CURB AND GUTTER, STREETS, DRIVES AND ALL OTHER SURFACE STRUCTURES REMOVED OR OTHERWISE DAMAGED DURING THE COURSE OF THE WORK. SIDEWALKS SHALL BE REMOVED AND REPLACED TO NEAREST JOINT BEYOND CONSTRUCTION AREA.
4. COMPACT SUBGRADE BENEATH PAVEMENTS IN ACCORDANCE WITH GRADING NOTES.
5. GRANULAR SUBBASE FOR PAVEMENTS SHALL MEET THE LIMITS OF GRADATION NO. 14, IOWA DOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4123.
6. PROOF—ROLL SUBGRADE WITH A MINIMUM 25 TON G.V.W. TRUCK TO IDENTIFY AREAS OF SOFT OR UNSTABLE SUBGRADE. REMOVE AND REPLACE UNSTABLE AREAS WITH SUITABLE COMPACTED MATERIAL.

PCC PAVEMENT NOTES

1. PCC PAVING THICKNESS SHALL BE AS NOTED ON THE PLANS AND DETAILS.
2. MATERIALS AND CONSTRUCTION FOR PORTLAND CEMENT CONCRETE PAVEMENTS SHALL MEET THE REQUIREMENT OF IOWA DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, LATEST REVISION, SECTION 2301. THE PARAGRAPHS FOR MEASUREMENT AND PAYMENT SHALL NOT APPLY.
3. MINIMUM 28—DAY COMPRESSIVE STRENGTH FOR CONCRETE USED FOR PAVEMENTS SHALL BE 4000 PSI. CONCRETE SHALL BE C—3 OR C—4 WITH TYPE I CEMENT. AIR CONTENT SHALL BE 6—1/2% ± 1.5% Limestone AGGREGATE SHALL BE 1—1/2" MAXIMUM SIZE. AIR ENTRAINMENT ADMIXTURES AND WATER REDUCING ADMIXTURES SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4103. DURABILITY FOR PORTLAND CEMENT CONCRETE SHALL BE CLASS 2. JOINT SEALER SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4136 FOR HOT POURED JOINT SEALER.
4. CURING COMPOUND (WHITE, DARK OR CLEAR) SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR SECTION 4105. APPLICATION METHOD AND CURING SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 2301.19.
5. FLYASH PER IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4108 MAY BE SUBSTITUTED FOR CEMENT AT THE RATES SPECIFIED IN SECTION 2301.04E AFTER NOTIFICATION AND AUTHORIZATION BY THE OWNER'S REPRESENTATIVE.
6. PAVEMENT TIE BARS AND DOWEL BARS SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4151. EPOXY COATING, WHEN SPECIFIED, SHALL CONFORM TO IOWA DOT SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION SECTION 4151.03E.
7. CURBS SHALL BE CAST INTEGRAL WITH CONCRETE PAVEMENT UNLESS NOTED OTHERWISE. EDGES SHALL BE ROUNDED BUT NOT ROLLED.
8. PCC SIDEWALKS SHALL BE 4 INCHES THICK, EXCEPT AT DRIVEWAYS. THICKNESS OF PCC WALKS AT DRIVEWAYS SHALL MATCH THAT OF THE ADJACENT DRIVEWAY. TRANSVERSE CONSTRUCTION JOINTS SPACING SHALL BE AT 4 FEET MAXIMUM CENTERS FOR 4 FEET WIDE WALKS, AND 5 FEET MAXIMUM CENTERS FOR 5 FEET WIDE WALKS, 6 FEET MAXIMUM CENTERS FOR WALKS GREATER THAN 5 FEET IN WIDTH. LONGITUDINAL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN SLABS GREATER THAN 8 FEET IN WIDTH. PLACE EXPANSION JOINTS WHERE WALK MEETS OTHER WALKS, BACK OF CURBS, FIXTURES, OR OTHER STRUCTURES, AND AT INTERVALS NOT EXCEEDING 50 FEET. SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% DRAINING TOWARDS BACK OF CURB, UNLESS OTHERWISE NOTED.
9. ONE INCH PREFORMED FOAM EXPANSION JOINT MATERIAL SONOFLEX "F" BY SONOBOR OR APPROVED EQUAL SHALL BE PLACED BETWEEN NEW PAVEMENT CONSTRUCTION AND THE FACES OF BUILDINGS, STOOPS, EXISTING SLABS, AND OTHER FIXTURES, UNLESS NOTED ON THE DRAWINGS. ALL JOINTS SHALL BE SEALED WITH A SELF—LEVELING POLYURETHANE SUCH AS SONOLASTIC SL—1 OR APPROVED EQUAL.
10. ALL PCC SHALL BE JOINTED AT 12 FEET O.C. MAXIMUM DISTANCE. JOINTING SHALL BE IN ACCORDANCE WITH CEDAR RAPIDS METROPOLITAN AREA STANDARD DETAILS FOR PUBLIC IMPROVEMENTS NUMBERS 2700—021, 2700—022, AND 2700—023.
11. CONSTRUCT 1" EXPANSION JOINTS ON PCC CURB AT ALL ENDS OF RETURN RADII.

PAVEMENT MARKING NOTES

1. PAINT PARKING STRIPING AND SIDEWALK CURBS, TRAFFIC DIRECTION ARROWS, HANDICAP SYMBOLS AND FACE OF LIGHT POLE BASES "WHITE" WHERE SHOWN ON PLANS. VERIFY COLOR OF PAVEMENT MARKINGS WITH OWNER PRIOR TO CONSTRUCTION.
2. PAVEMENT MARKINGS SHALL BE FAST DRY TRAFFIC LANE MARKING PAINT CONFORMING TO IOWA DOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION, LATEST EDITION, SECTION 4183.03. REFLECTORIZED SPHERES FOR TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF IOWA DOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION, LATEST EDITION, SECTION 4184.
3. PAINTING SHALL NOT BEGIN UNTIL PAVEMENT SURFACE HAS BEEN POWER BROOMED AND HAND SWEEP AS NECESSARY TO REMOVE LOOSE MATERIALS AND DIRT; AND NOT BEFORE ADEQUATE CURING TIME HAS BEEN OBTAINED ON THE PAVEMENT.
4. APPLY PAINT AT MANUFACTURER'S RECOMMENDED RATES IN TWO SEPARATE COATS FOR ALL PAVEMENT MARKINGS. ALL STRIPES SHALL BE 4 INCHES WIDE UNLESS OTHERWISE INDICATED. HANDICAP SYMBOLS SHALL CONFORM TO APPLICABLE ADA REGULATIONS.

UTILITY NOTES

1. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, LATEST EDITION, AS APPROVED BY THE IOWA DNR, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. VERIFY THE ELEVATION OF POSSIBLE CONFLICTING UTILITIES PRIOR TO CONSTRUCTING PROPOSED WATER MAINS, SANITARY SEWERS, STORM SEWERS, ETC. ANY CONFLICTS MUST IMMEDIATELY BE BROUGHT TO THE ENGINEER'S ATTENTION.
3. SITEWORK UTILITY CONTRACTOR TO EXTEND ALL PIPING TO WITHIN 5' OF BUILDING AND CAP FOR CONNECTION BY BUILDING UTILITY CONTRACTOR UNLESS OTHERWISE INDICATED. COORDINATE ALL INVERT ELEVATIONS AND PIPING LOCATIONS WITH BUILDING PLANS.
4. ALL OPEN EXCAVATIONS SHALL BE PROTECTED WITH SAFETY FENCE, BARRIERS OR BARRICADES IN ACCORDANCE WITH OSHA.
5. CONTRACTOR SHALL REFER TO BUILDING PLANS FOR UTILITY ENTRANCE LOCATIONS, SIZES, AND ELEVATIONS PRIOR TO BEGINNING UTILITY CONSTRUCTION.

WATER DISTRIBUTION NOTES

1. ALL PERMITS SHALL BE SECURED AND FEES SHALL BE PAID PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL CONTACT CEDAR RAPIDS UTILITIES DEPARTMENT WATER ENGINEERING OFFICE (319) 286—5950 TO OBTAIN A 'START WORK' ORDER 24 HOURS PRIOR TO BEGINNING CONSTRUCTION OF WATER SYSTEM IMPROVEMENTS.
3. CONSTRUCTION OF PUBLIC AND PRIVATE WATER SYSTEM IMPROVEMENTS REQUIRES AN APPROVED PLAN SET ON FILE IN THE CEDAR RAPIDS UTILITIES DEPARTMENT WATER ENGINEERING OFFICE, 1111 SHAVER ROAD NE.
4. ON SITE INSPECTION OF WATER MAIN INSTALLATION WILL BE PROVIDED BY THE MUNICIPAL UTILITY.
5. THE CONTRACTOR IS RESPONSIBLE TO CONTACT IOWA ONE—CALL 1—800—292—8989 PRIOR TO EXCAVATION.
6. WATER MAIN MATERIALS, INSTALLATION AND TESTING MUST COMPLY WITH CEDAR RAPIDS METROPOLITAN AREA (METRO) DESIGN STANDARDS AND SPECIFICATIONS. THIS APPLIES TO BOTH PUBLIC AND PRIVATE WATER MAINS AND LARGE SERVICE LINES (3" OR LARGER) ON THE DISTRIBUTION SIDE OF THE METER. FOR PUBLICLY ACCEPTED IMPROVEMENTS DONE WITH SUBDIVISION WORK, THE CONTRACTOR SHALL PURCHASE HYDRANTS AND VALVES FROM THE CITY PER CURRENT POLICY. EXCEPTIONS MUST BE PRE—APPROVED BY WATER ENGINEERING.
7. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CEDAR RAPIDS UTILITIES DEPARTMENT WATER ENGINEERING OFFICE FOR ANY VARIANCE FROM THE APPROVED PLAN.
8. CONTRACTOR SHALL CONTACT CEDAR RAPIDS UTILITIES DEPARTMENT WATER ENGINEERING OFFICE (319) 286—5950 FOR THE FOLLOWING SERVICES: WATER SHUT DOWN, TAP, FLUSH & FILL, SAMPLING AND OTHER SERVICES RELATED TO THE WATER SYSTEM. DISPOSAL OF HIGHLY CHLORINATED WATER SHALL BE IN COMPLIANCE WITH LOCAL, STATE & FEDERAL CODES.
9. FOR WATER MAINS THAT ARE TO BE ACCEPTED INTO THE PUBLIC WATER DISTRIBUTION SYSTEM, THE CONTRACTOR SHALL WARRANT THE WORKMANSHIP AND MATERIAL OF THE INSTALLED WATER MAINS FOR A PERIOD OF TWO (2) YEARS FROM DATE OF ACCEPTANCE, AND SHALL FURNISH THE MUNICIPALITY WITH A MAINTENANCE BOND COVERING THE COST OF THE WATER IMPROVEMENTS FOR THAT PERIOD.
10. ALL SERVICE TAP MATERIALS ARE TO BE FURNISHED BY THE CONTRACTOR. THE WATER UTILITY WILL MAKE ALL TAPS USING CONTRACTOR SUPPLIED MATERIALS THAT COMPLY WITH 'METRO' SPECIFICATIONS.
11. THE WATER UTILITY SHALL OPERATE ALL SYSTEM VALVES.
12. TRACER WIRE IS REQUIRED ON ALL PRIVATE AND PUBLIC WATER MAIN 3 INCHES IN DIAMETER OR LARGER. HOLES IN VALVE BOXES FOR TRACER WIRE MUST BE DRILLED.
13. WHERE WATER MAIN AND SANITARY SEWERS CROSS, ONE FULL (20 FOOT) LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SANITARY SEWER, AND THE VERTICAL DISTANCE SHOULD BE MAINTAINED 18 INCHES OR GREATER. WHERE WATER LINES AND SEWERS CROSS AND THE MINIMUM CLEARANCE CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER MAIN GRADE AWWA C—900 SDR—18 PVC OR DUCTILE IRON PIPE WITH COMPRESSION FITTINGS OR MECHANICAL JOINTS IF WITHIN 10 FEET OF THE WATER MAIN.
14. UNLESS SPECIFICALLY APPROVED OTHERWISE, ALL LATERAL CONNECTIONS TO EXISTING MAINS THAT HAVE BEEN PREVIOUSLY TESTED AND TURNED INTO SERVICE, THAT ARE 4—INCH OR LARGER SHALL BE DONE BY 'LIVE' TAP USING AN APPROVED TAPPING SLEEVE OR SADDLE AND VALVE.
15. WATER MAINS AND LARGE SERVICES (3" OR LARGER) OVER 20 FEET IN LENGTH ARE REQUIRED TO BE DISINFECTED, FLUSHED, FILLED AND PRESSURE TESTED. PRESSURE / LEAKAGE TESTS ARE CONDUCTED AT 150 PSI UNDER THE DIRECTION OF THE CEDAR RAPIDS WATER UTILITY.
16. ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C 651. NO WATER MAIN SHALL BE PLACED INTO SERVICE UNTIL ALL SAMPLES HAVE PASSED BACTERIOLOGICAL TESTS.
17. HEAVILY CHLORINATED WATER MAY NOT REMAIN IN THE PIPELINE FOR MORE THAN 48 HOURS. HEAVILY CHLORINATED WATER SHALL BE FLUSHED THOROUGHLY FROM THE PIPELINE. UNTIL THE REPLACEMENT WATER THROUGHOUT ITS LENGTH IS EQUAL IN QUALITY TO PERMANENT SOURCE OF SUPPLY, THE CHLORINATED WATER SHALL BE NEUTRALIZED BY TREATING WITH SODIUM BISULFITE, SODIUM SULFITE, SODIUM THIOSULFATE OR EQUAL APPROVED CHEMICAL BEFORE DISPOSAL.

IN ORDER TO PREVENT DAMAGE TO THE PIPE LINING AND VALVE COMPONENTS FROM DRY POWDER OR TABLET CHLORINE THE FOLLOWING PROCEDURE MUST BE USED. IN CASES WHERE THE CONTRACTOR IS UTILIZING POWDER OR TABLET CHLORINE DEPOSITED INTO THE WATER MAIN WHILE IT IS BEING INSTALLED, THE MAIN MUST BE FILLED WITHIN 48 HOURS.

THE CONTRACTOR IS RESPONSIBLE FOR WATER MAIN FLUSHING OPERATIONS. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO VERIFYING PROCEDURES, PROVIDING ADEQUATE PERSONNEL AND EQUIPMENT, OBTAINING APPROVAL TO DISCHARGE INTO STORM OR SANITARY SEWERS, MONITORING SEWERS FOR BACK—UPS, MONITORING FLOW AND DE—CHLORINATION RESULTS. WATER DIVISION PERSONNEL WILL OPERATE VALVES AS REQUESTED.

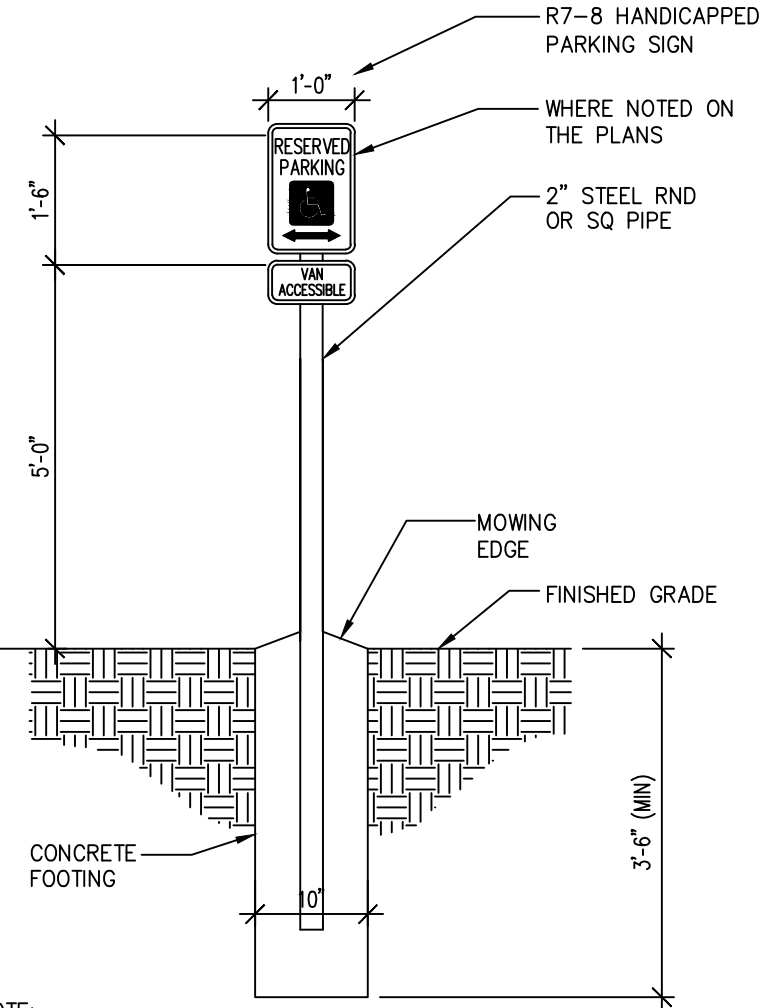
IF INSTALLATION OF A CASING PIPE IS REQUIRED, IT SHALL INCLUDE CASING SPACERS AND WATERTIGHT MECHANICAL RUBBER END SEALS (METRO SPEC. 02250).

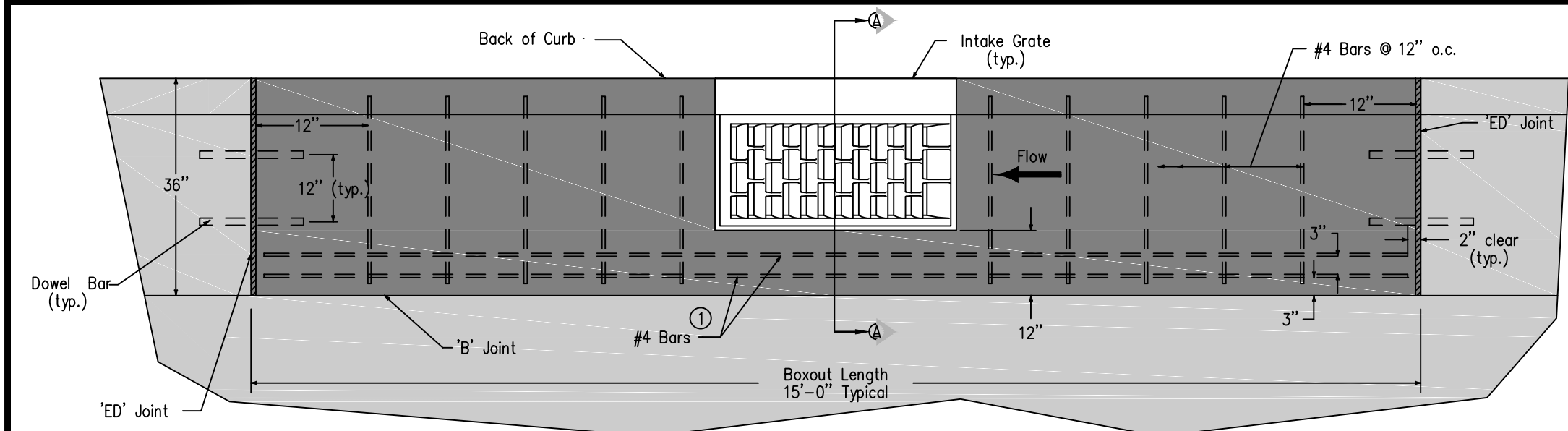
SANITARY SEWER NOTES

1. SANITARY SEWER CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATIONS.
2. 8—INCH SANITARY SEWER MAIN SHALL BE PVC TRUSS CONFORMING TO ASTM D2680, MINIMUM PIPE STIFFNESS OF 200 PSI (ASTM D2412). PLASTIC MATERIAL FOR PIPE AND FITTINGS SHALL BE A RIGID PVC PLASTIC AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM D1784 FOR A MINIMUM CELL CLASSIFICATION OF 12454. ALL JOINTS SHALL BE MADE WITH GASKETED BELL COUPLING CONNECTIONS. NO LEAKAGE WHEN GASKETED PIPE JOINTS ARE TESTED IN ACCORDANCE WITH ASTM D2680, SECTION 10.4.2 AND ASTM D3212. ELASTOMERIC SEALS (GASKETS) SHALL MEET THE REQUIREMENTS OF ASTM F477.
2. SANITARY SEWER SERVICE PIPE AND FITTINGS SHALL BE SDR 23.5 POLYVINYL CHLORIDE (PVC), AND SHALL CONFORM TO ASTM D3034 WITH A MINIMUM PIPE STIFFNESS OF 153 PSI (ASTM D2412) PER CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATION SECTION 02300.
3. CLASS B BEDDING SHALL BE USED FOR SANITARY SEWER CONSTRUCTION. COMPACTED BACKFILL IN PIPE ENVELOPE MAY BE SUITABLE EXCAVATED MATERIAL.

STORM SEWER NOTES

1. STORM SEWER MAY BE EITHER CLASS III REINFORCED CONCRETE PIPE OR HIGH DENSITY POLYETHYLENE PIPE, UNLESS SPECIFICALLY NOTED ON PLANS.
2. RCP STORM SEWER SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) TO DEPTH OF COVER UP TO 12' CONFORMING TO ASTM C76 OR AASHTO M170.
3. RCP STORM SEWER SHALL BE CONSTRUCTED WITH CLASS C BEDDING.
4. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE CORRUGATED WITH INTEGRALLY FORMED SMOOTH INTERIOR MEETING THE REQUIREMENTS OF THE CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATIONS.
5. HDPE STORM SEWER SHALL BE CONSTRUCTED WITH CLASS A BEDDING. HDPE STORM SEWER SHALL BE BACKFILLED WITH GRANULAR BACKFILL AGGREGATE TO A MINIMUM OF 12" ABOVE THE TOP OF THE PIPE.
6. SUBDRAIN MATERIAL SHALL BE RIGID PERFORATED POLYETHYLENE PIPE. MATERIAL SHALL BE ADVANCED DRAINAGE SYSTEMS, N—12, SMOOTH INTERIOR OR APPROVED EQUIVALENT.
7. STORM SEWER LINES SHALL BE A MINIMUM OF 10' FROM WATER LINES RUNNING PARALLEL. AT CROSSINGS, A MINIMUM 18" SEPARATION MUST BE PROVIDED.
8. ALL LINE AND GRADE CONTROL WILL BE DONE WITH A LASER BEAM, WITH GRADE CHECKS AT 25', 50' AND THEN EVERY 100' BETWEEN MANHOLES.
9. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN A RECORD DRAWING SET SHOWING LOCATIONS OF ALL ROOF DRAINS AND OTHER PERTINENT INFORMATION REGARDING THE STORM SEWER CONSTRUCTION. THE RECORD DRAWING SET WILL BE PROVIDED TO THE OWNER.



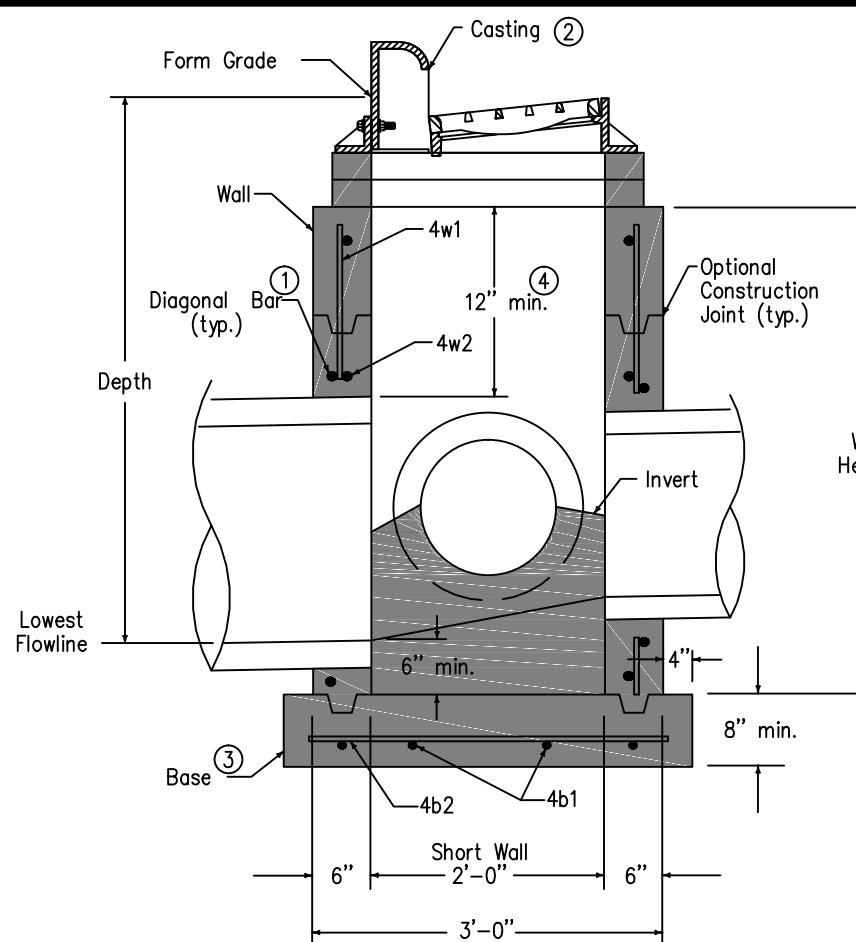


BOXOUT IN PCC PAVEMENT AND PCC BASE WITH HMA OVERLAY

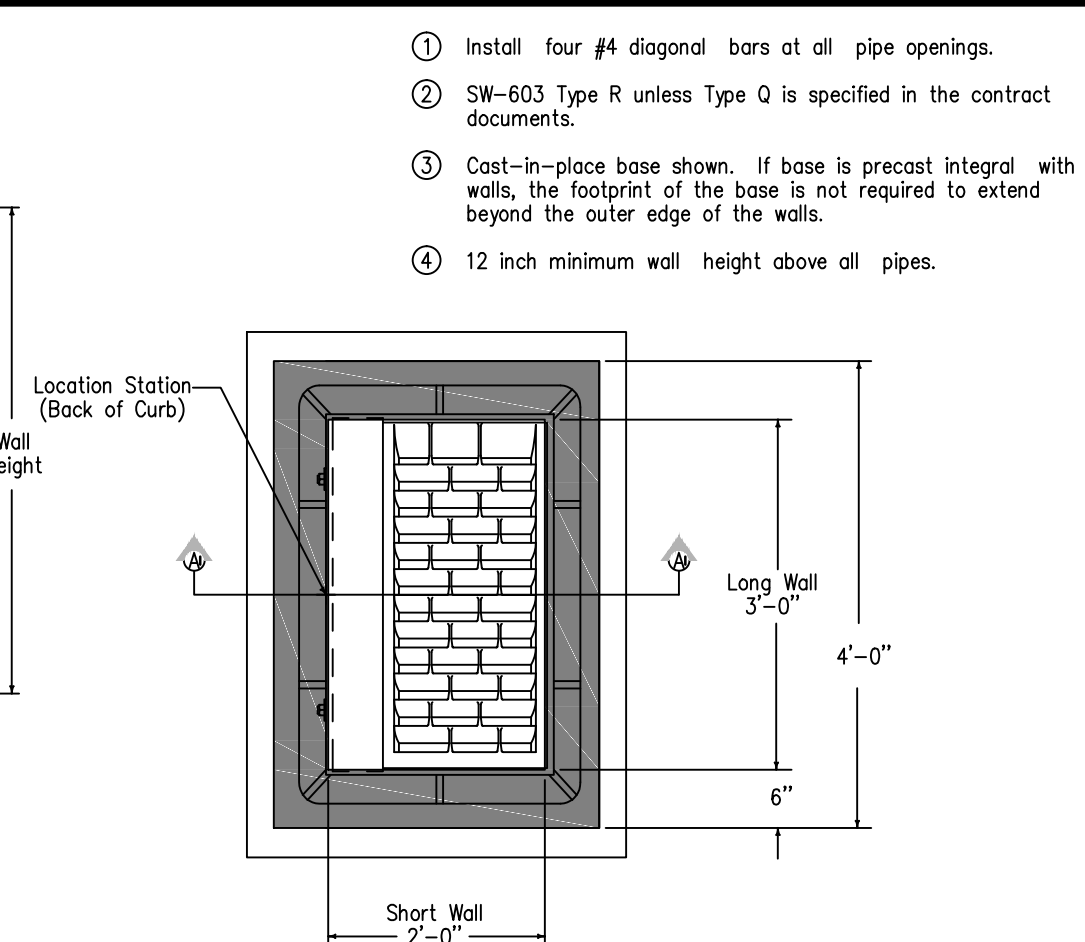
Transverse joint spacing on new concrete pavement is controlled by the intake boxout. Adjust adjacent joint spacing as required to accommodate boxouts. For retrofit intakes, match existing concrete pavement joints. Stop any transverse pavement joints that do not conform to the minimum spacing requirements at the edge of the boxout.

- ① Center bars vertically within slab.

FIGURE 6010.514	STANDARD ROADPLAN	REVISION
FIGURE 6010.514	STANDARD ROADPLAN	NEW [04-21-09]
REVISIONS: New, Replaces SUDAS Figure 6030.16.	SHEET 1 of 3	SW-514
SUDAS DIRECTOR	DESIGN METHOD ENGINEER	
BOXOUTS FOR GRATE INTAKES		



SECTION A-A

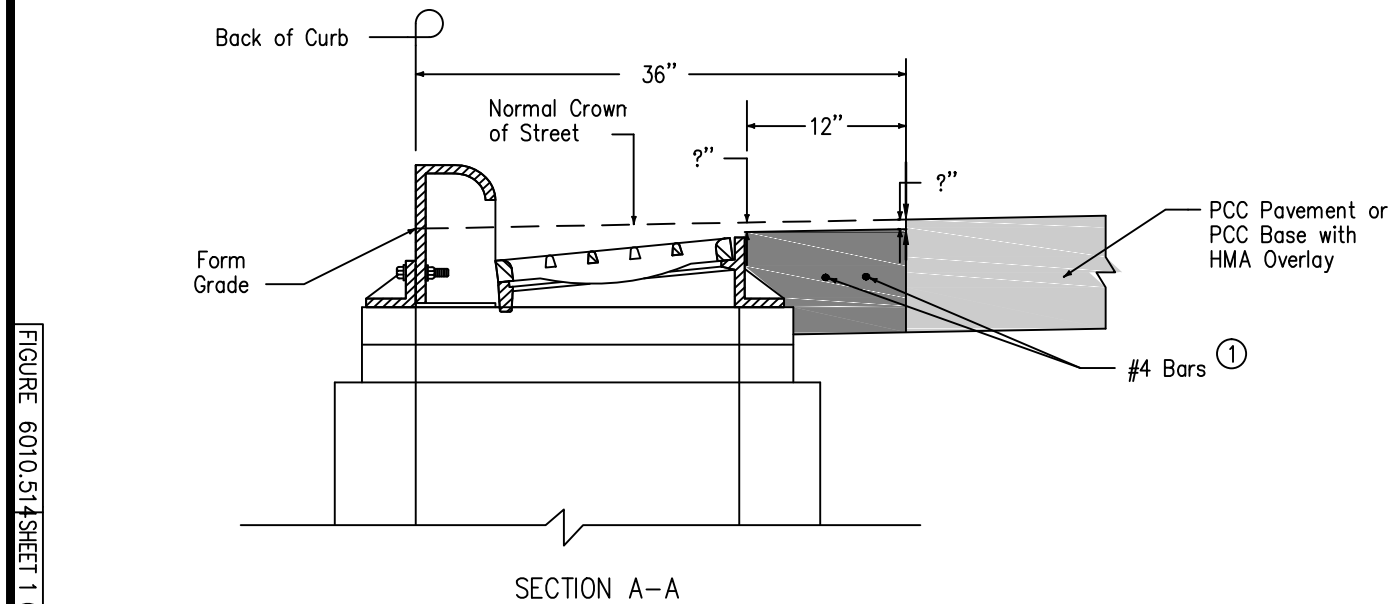


- Install four #4 diagonal bars at all pipe openings.
- SW-603 Type R unless Type Q is specified in the contract documents.
- Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
- 12 inch minimum wall height above all pipes.

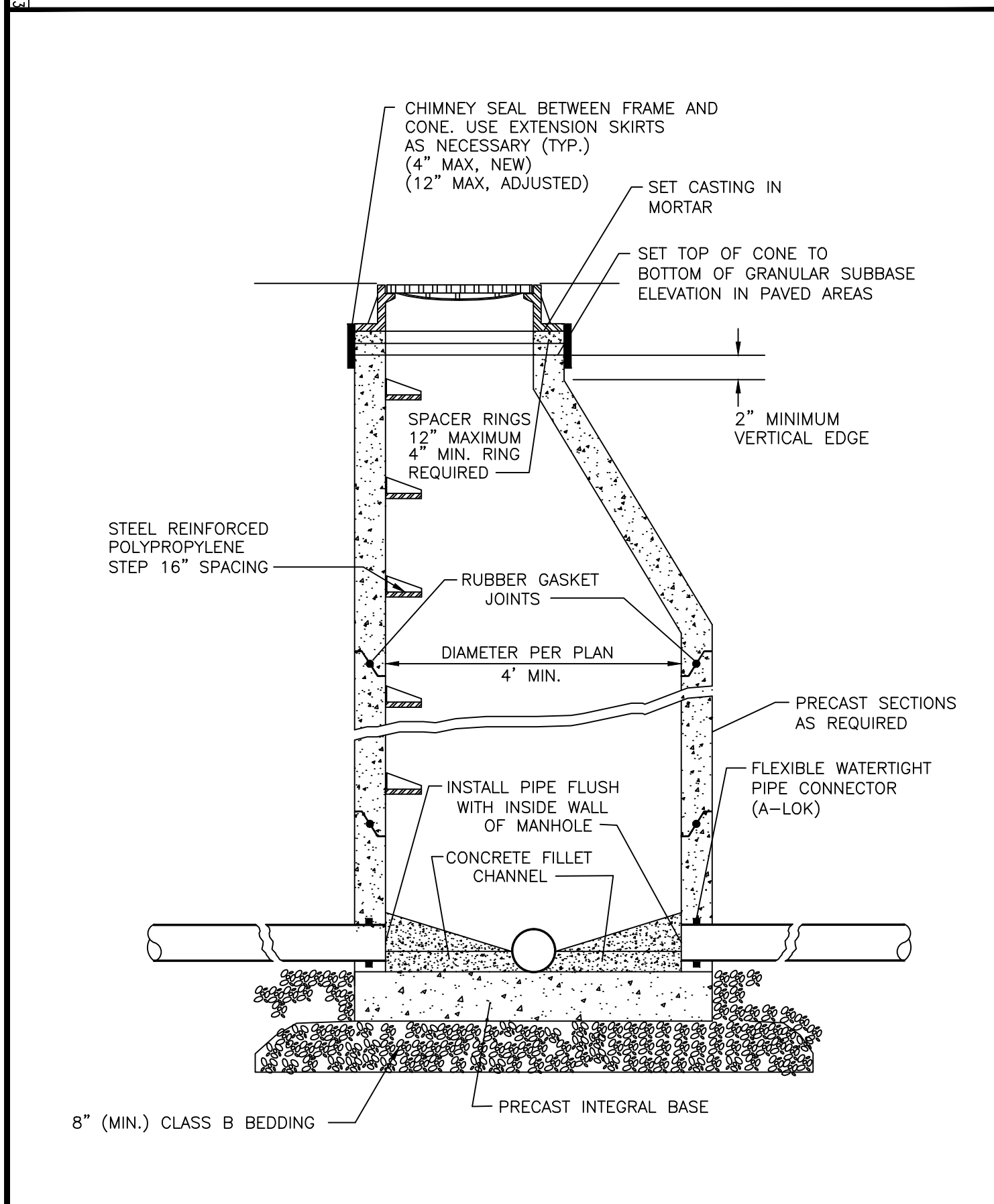
FIGURE 6010.501	STANDARD ROADPLAN	REVISION
FIGURE 6010.501	STANDARD ROADPLAN	NEW [04-21-09]
REVISIONS: New, Replaces SUDAS Type "M-A" Intake.	SHEET 1 of 1	SW-501
SUDAS DIRECTOR	DESIGN METHOD ENGINEER	
SINGLE GRATE INTAKE		

Mark	Size	Location	Shape	Length	Count	Spacing
4w1	4	Walls	—	Wall Height minus 4"	14	12"
4w2	4	Long Walls	—	3'-8"	Varies	12"
4w3	4	Short Walls	—	2'-8"	Varies	12"
4b1	4	Base	—	4'-2"	4	10"
4b2	4	Base	—	3'-2"	5	10"

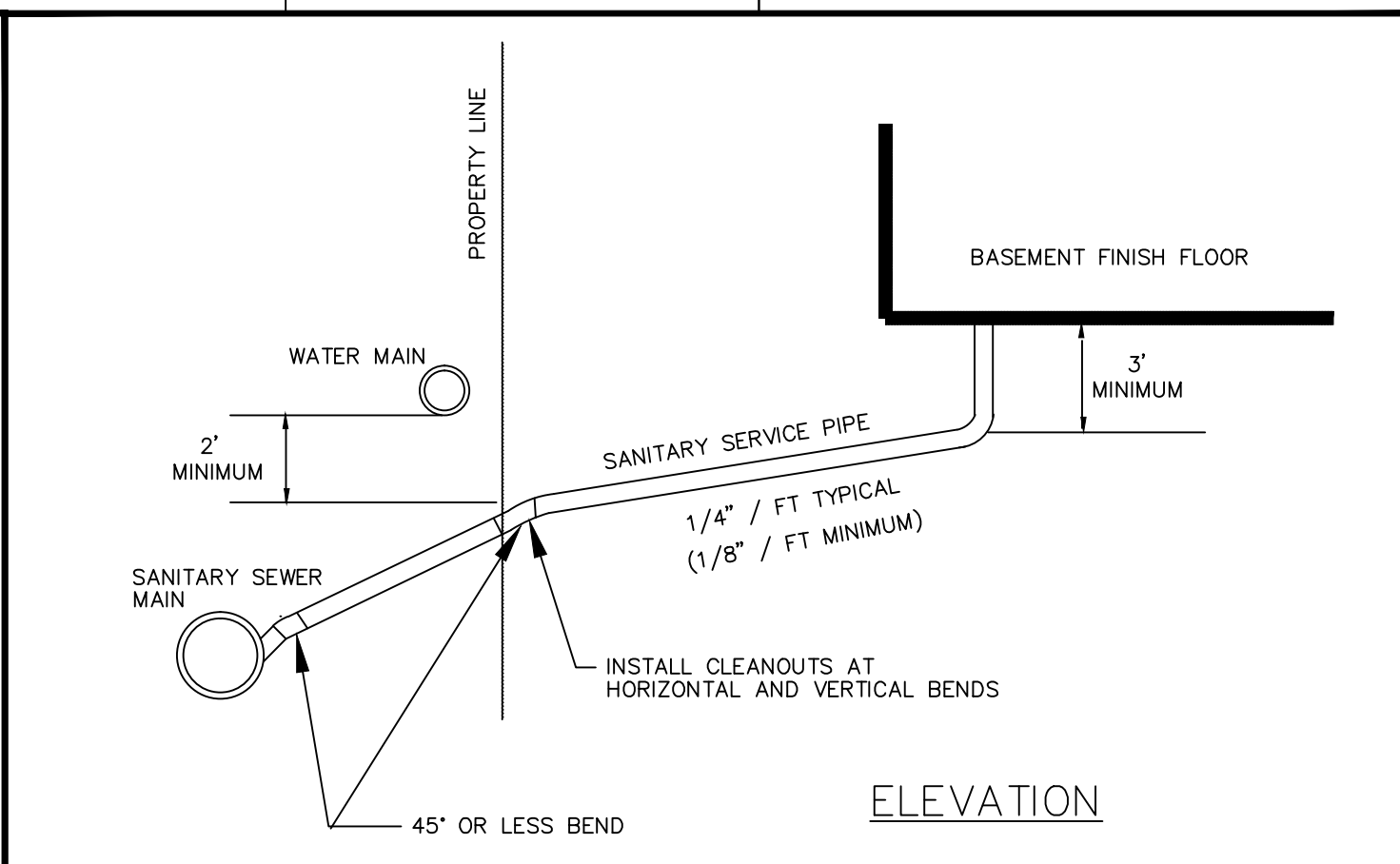
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"



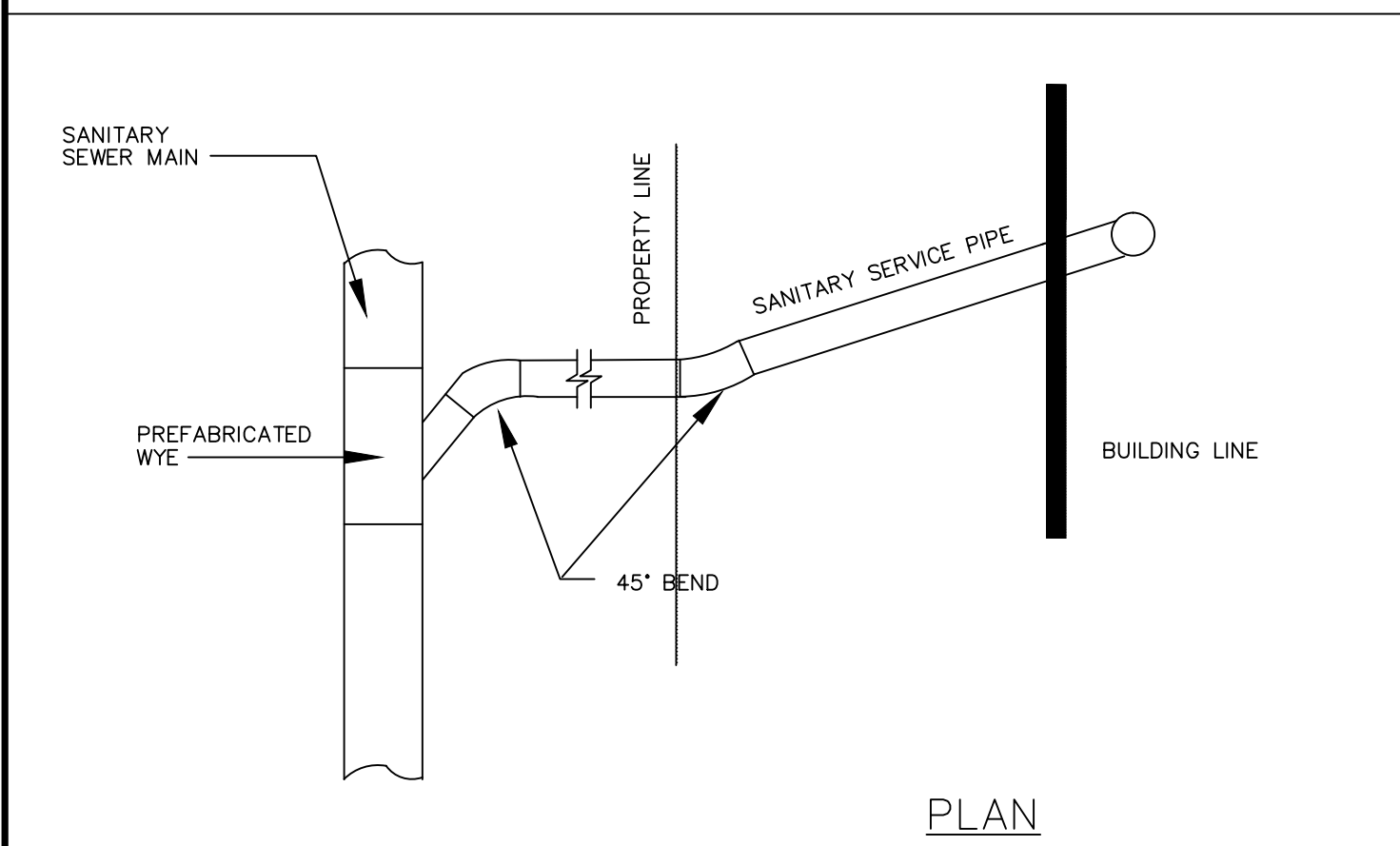
SECTION A-A



FILE NO.: 2300-041	CEDAR RAPIDS METROPOLITAN AREA
APPROVAL DATE: AUG 1999	STANDARD DETAILS FOR PUBLIC IMPROVEMENTS
REVISION NO.:	
REVISION DATE:	
NO. 2300-041	STANDARD SANITARY SEWER MANHOLE

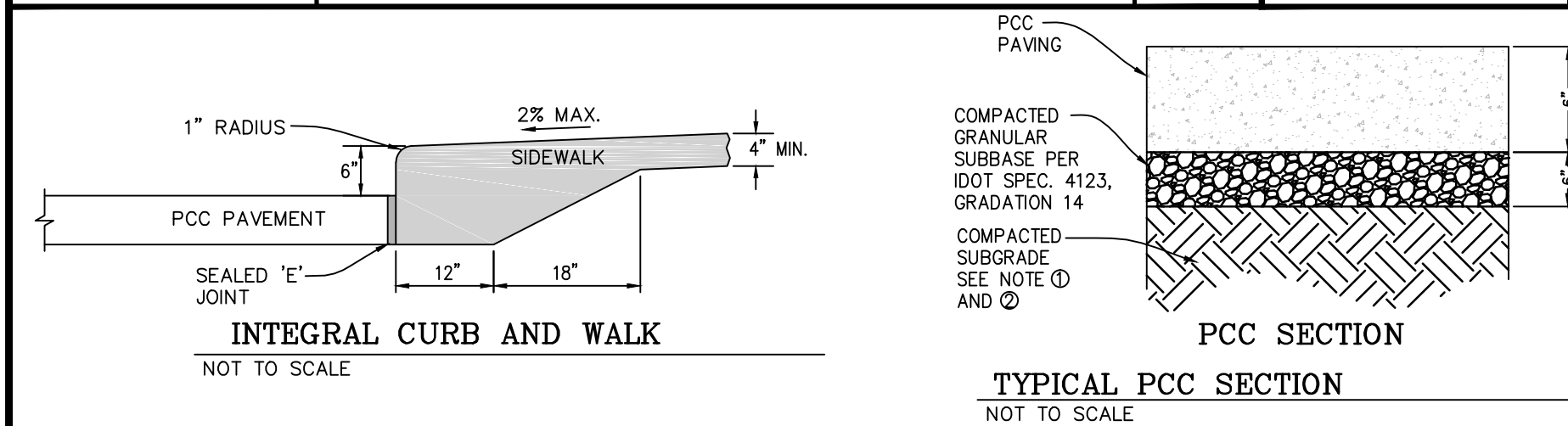


ELEVATION



PLAN

FILE NO.: 2300-060	CEDAR RAPIDS METROPOLITAN AREA
APPROVAL DATE: AUG 1999	STANDARD DETAILS FOR PUBLIC IMPROVEMENTS
REVISION NO.:	
REVISION DATE:	
NO. 2300-060	SANITARY SERVICE LINE

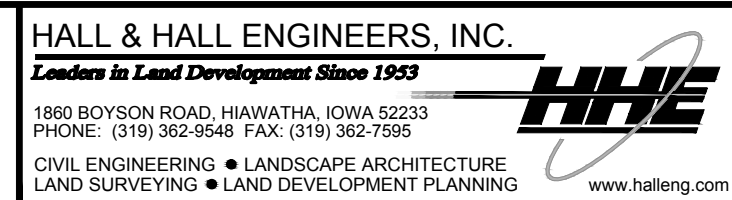


TYPICAL PCC SECTION

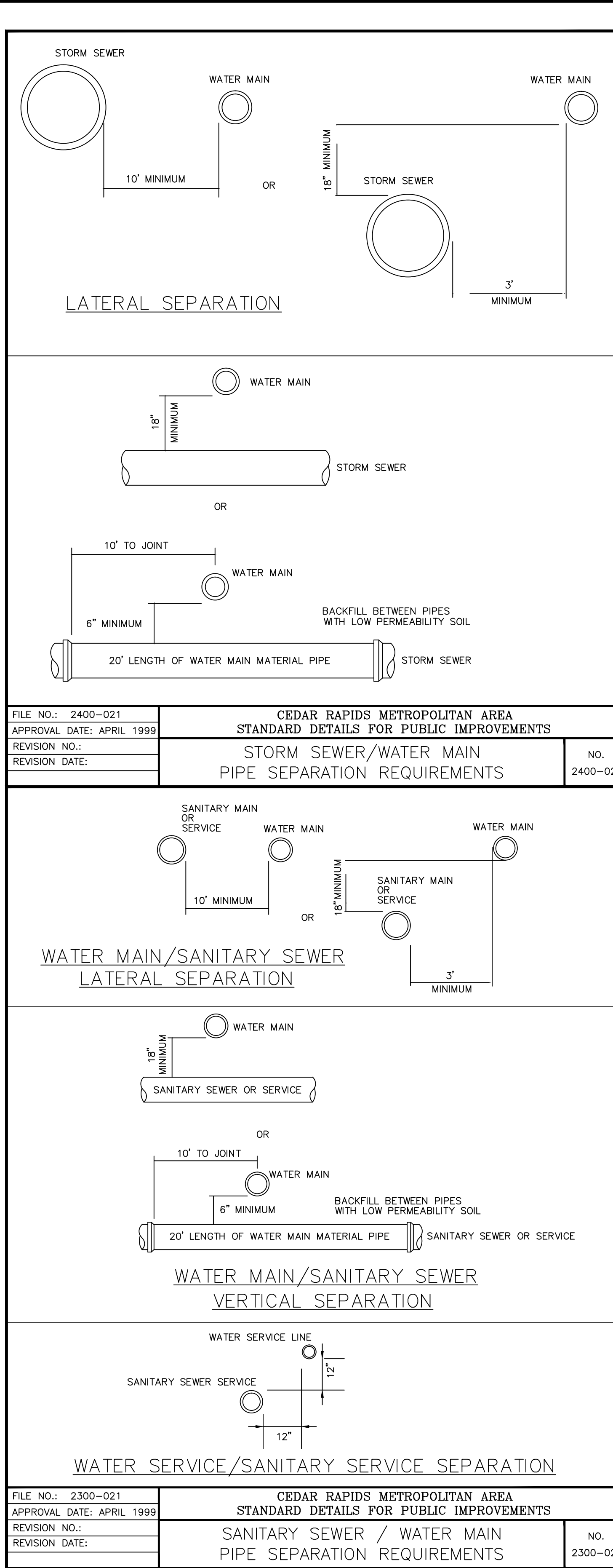
- PAVEMENT SECTION IN CUT AREAS
-SUITABLE EXISTING SUBGRADE: CUT TO DESIGN SUBGRADE ELEVATION. SCARIFY AND RECOMPACT THE TOP 12" TO 98% OF THE MATERIALS STANDARD PROCTOR DRY DENSITY.
-EXISTING EXPANSIVE SOIL OR UNSUITABLE SOIL: OVER-EXCAVATE 12". REPLACE WITH SUITABLE ON-SITE FILL MATERIAL OR STRUCTURAL FILL. COMPACT IN ACCORDANCE WITH GRADING NOTES.
-EXISTING GRADE SHALL BE PROOF ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PLACEMENT OF SUBBASE.

- PAVEMENT SECTION IN FILL AREAS SCARIFY TO A DEPTH OF 8" AND RECOMPACT.
-PRIOR TO PLACEMENT OF FILL, EXISTING GRADE SHALL BE PROOF ROLLED TO IDENTIFY AREAS OF SOFT OR UNSUITABLE MATERIAL.
-EXISTING EXPANSIVE OR UNSUITABLE SOIL: OVER-EXCAVATE MIN. 12", REPLACE WITH SUITABLE ON-SITE FILL MATERIAL. COMPACT IN ACCORDANCE WITH GRADING NOTES.
-PLACE AND COMPACT SUITABLE FILL MATERIAL IN ACCORDANCE WITH GRADING NOTES AND FILL SPECIFICATIONS. COMPACT MATERIAL TO 95% OF THE MATERIALS STANDARD PROCTOR DRY DENSITY, UNLESS WITHIN 1.0 FOOT OF FINAL SUBGRADE ELEVATION, THEN COMPACT MATERIAL TO 98% OF THE MATERIALS STANDARD PROCTOR DRY DENSITY.

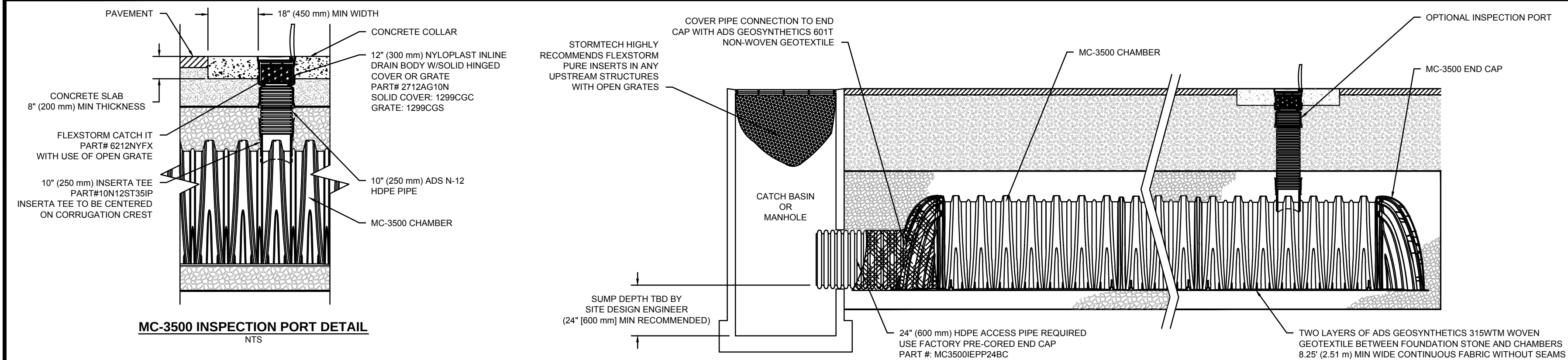
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APPROVED BY: BWJ					
DATE: 09/21/15					
FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE	



SITE CONSTRUCTION NOTES AND DETAILS					SHEET C8.0
PROJECT NO:10286-1					



FILE NO.: 2300-021	CEDAR RAPIDS METROPOLITAN AREA
APPROVAL DATE: APRIL 1999	STANDARD DETAILS FOR PUBLIC IMPROVEMENTS
REVISION NO.:	
REVISION DATE:	
NO. 2300-021	SANITARY SEWER / WATER MAIN PIPE SEPARATION REQUIREMENTS



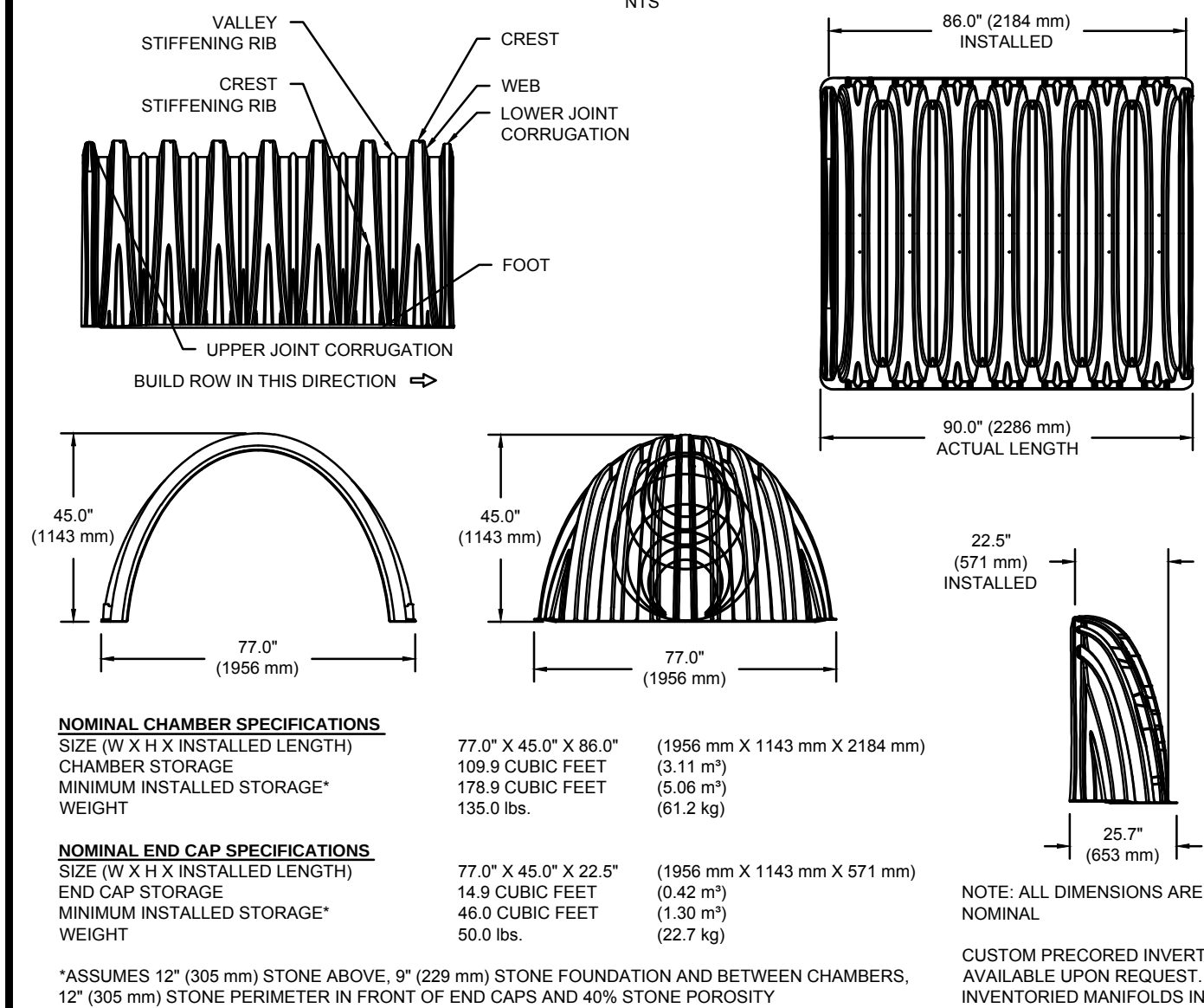
INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- A.3. USING A FLASHLIGHT AND STADIUM ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
- i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
- ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

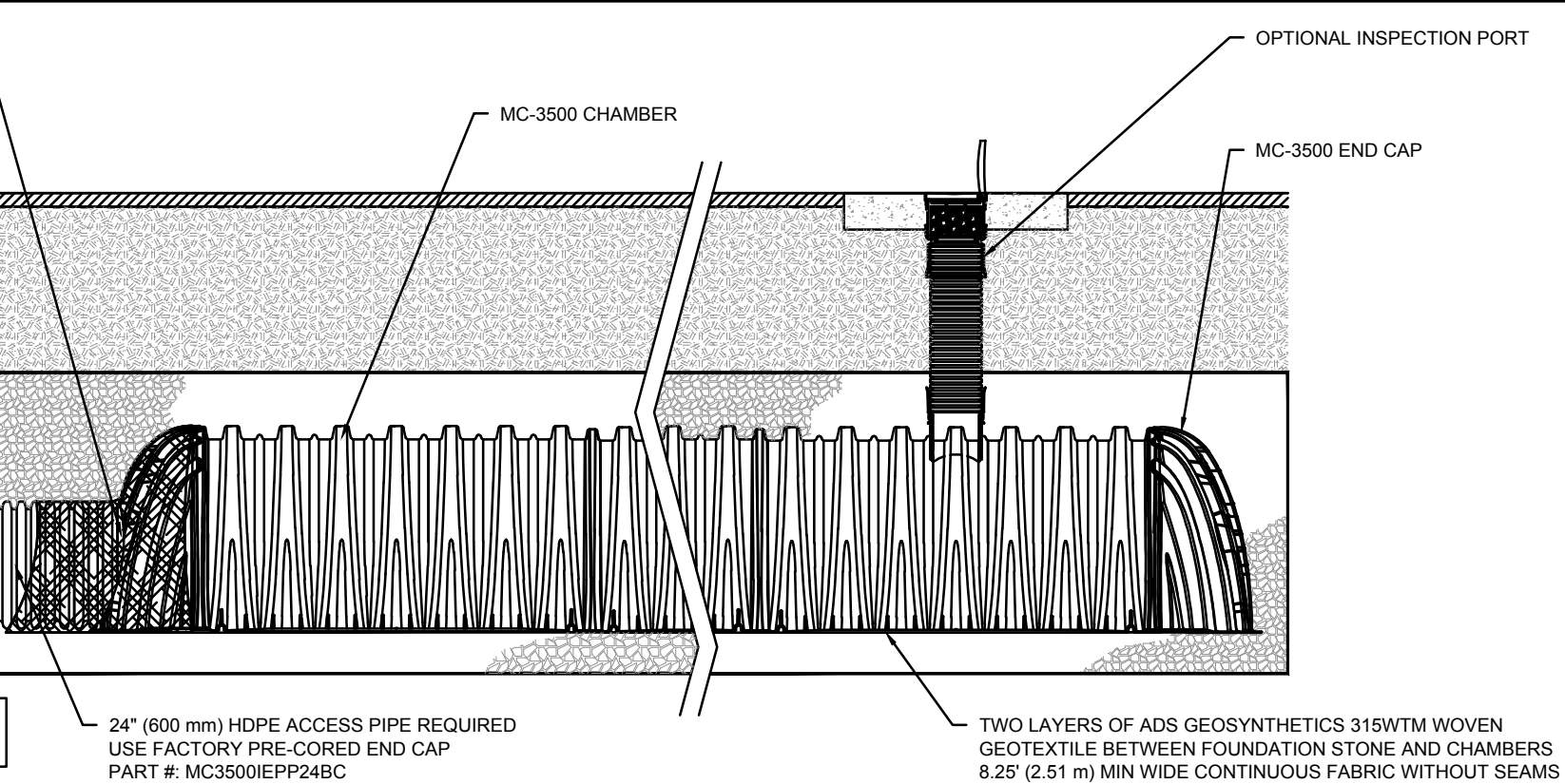
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-3500 TECHNICAL SPECIFICATION

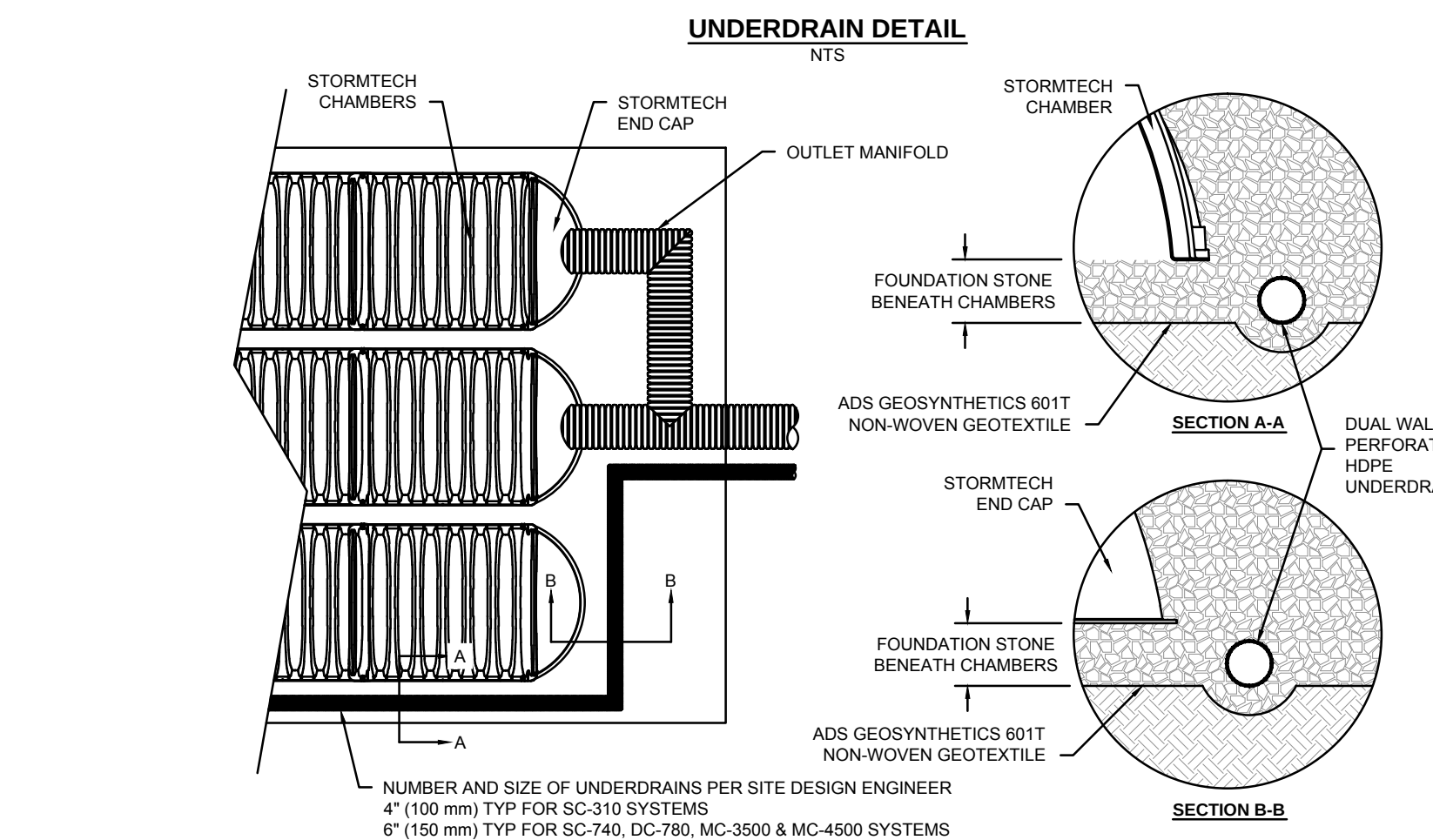


PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B	6" (150 mm)	---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B	8" (200 mm)	---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B	10" (250 mm)	---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B	12" (300 mm)	---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B	15" (375 mm)	---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18BC	18" (450 mm)	---	1.77" (45 mm)
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24BC	24" (600 mm)	---	2.06" (52 mm)
MC3500IEPP30BC	30" (750 mm)	---	---

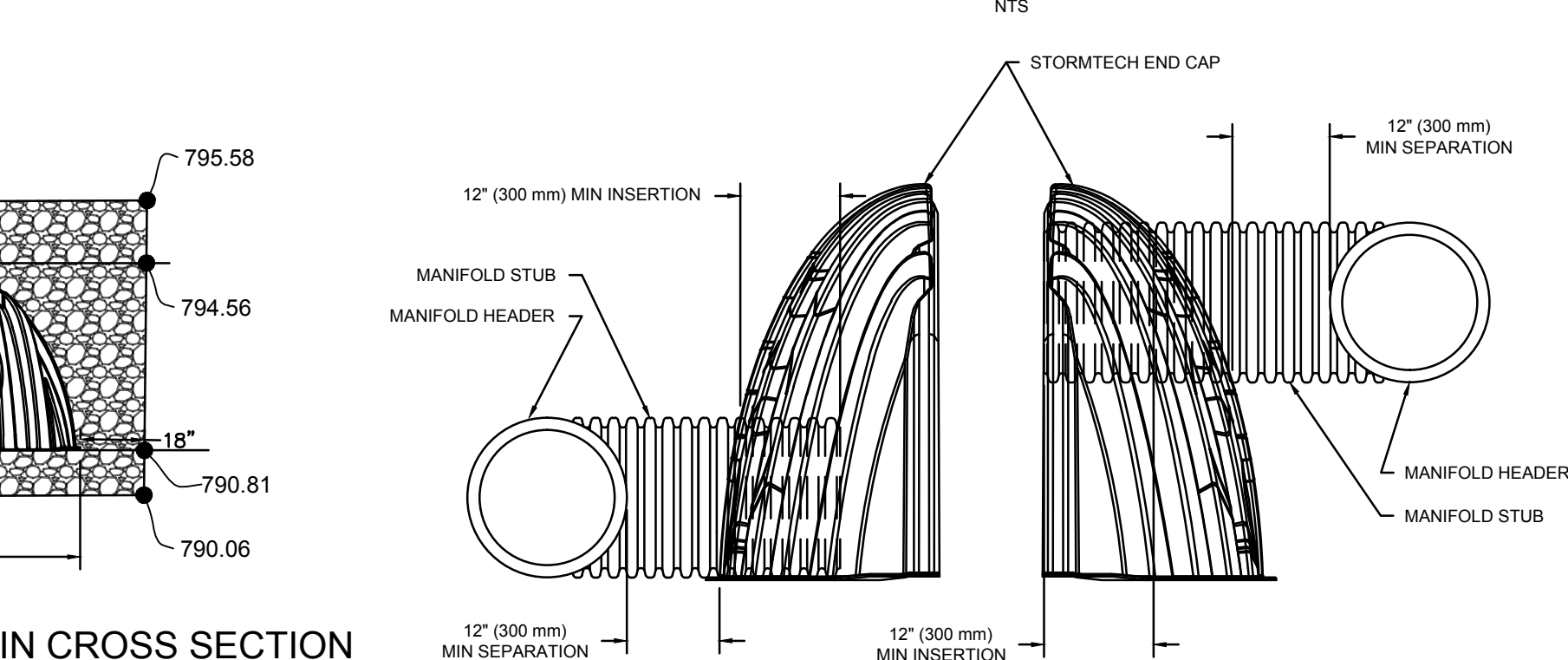
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APPROVED BY: BWJ					
DATE: 09/21/15					
FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE	



MC-3500 ISOLATOR ROW DETAIL

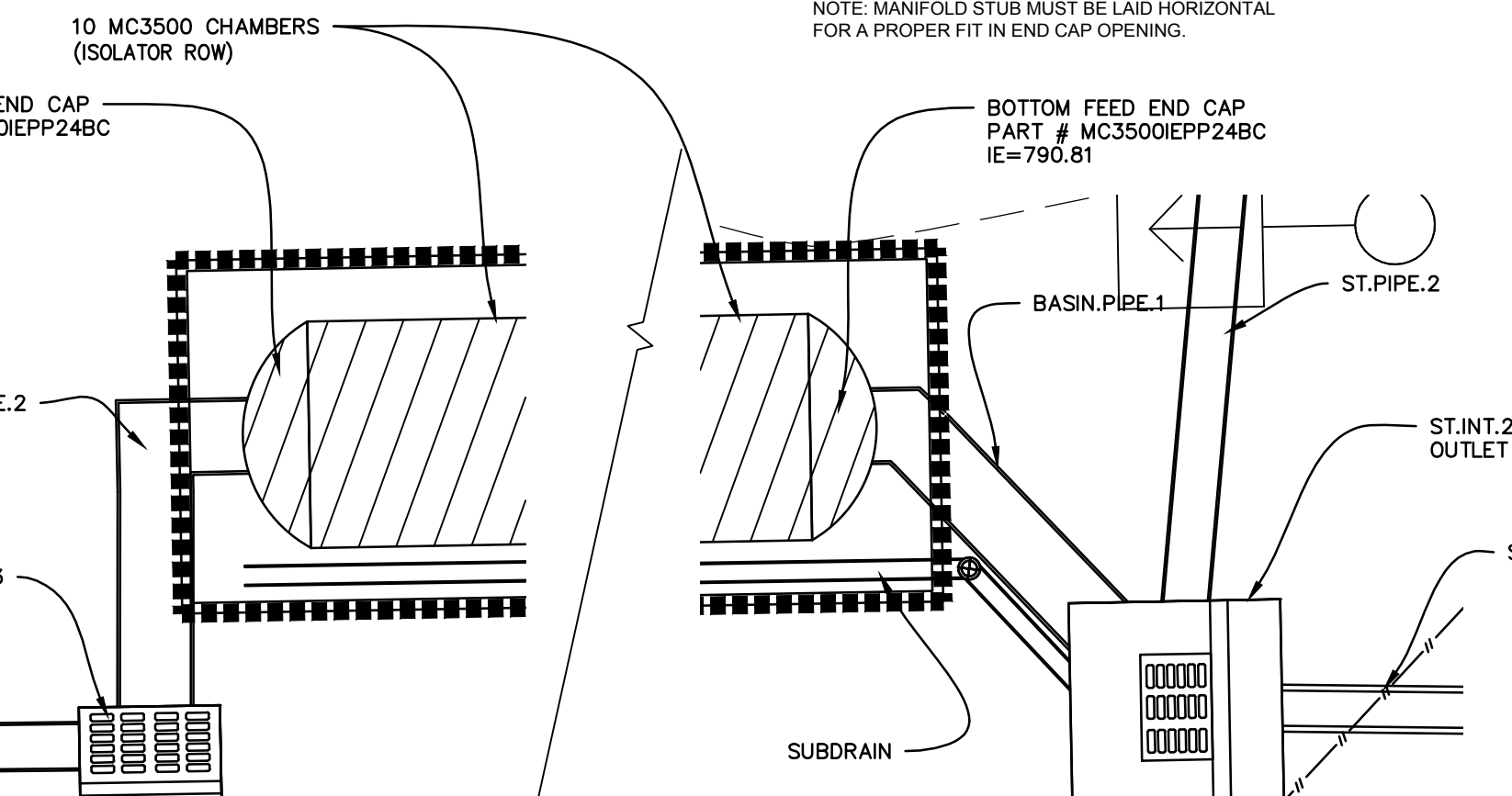


MC-SERIES END CAP INSERTION DETAIL



UNDERGROUND BASIN CROSS SECTION

NOT TO SCALE



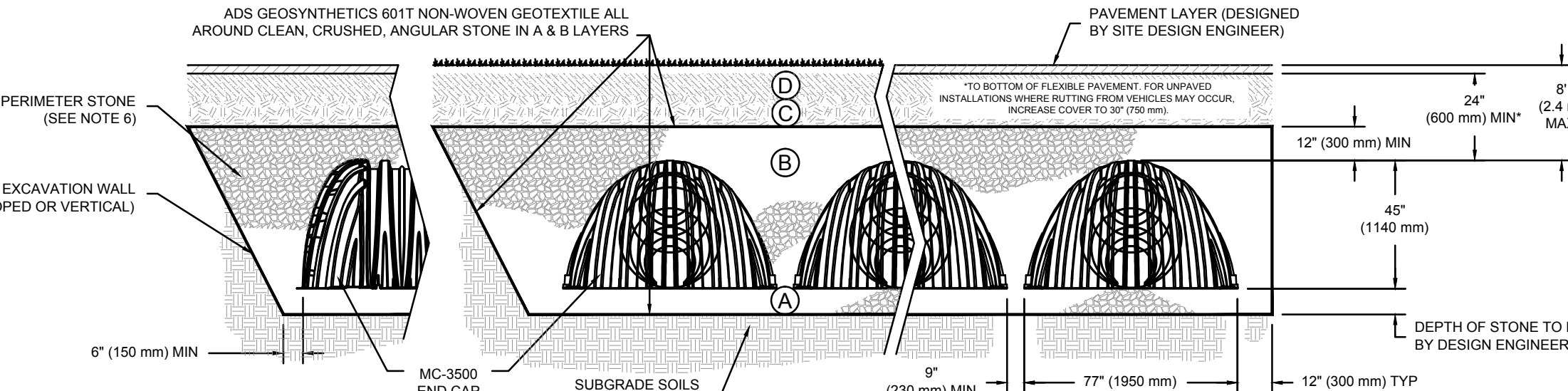
UNDERGROUND BASIN END CAP DETAIL

NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145' A-1, A-2-4, A-3 OR AASHTO M43' 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43' 3, 4	
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43' 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.

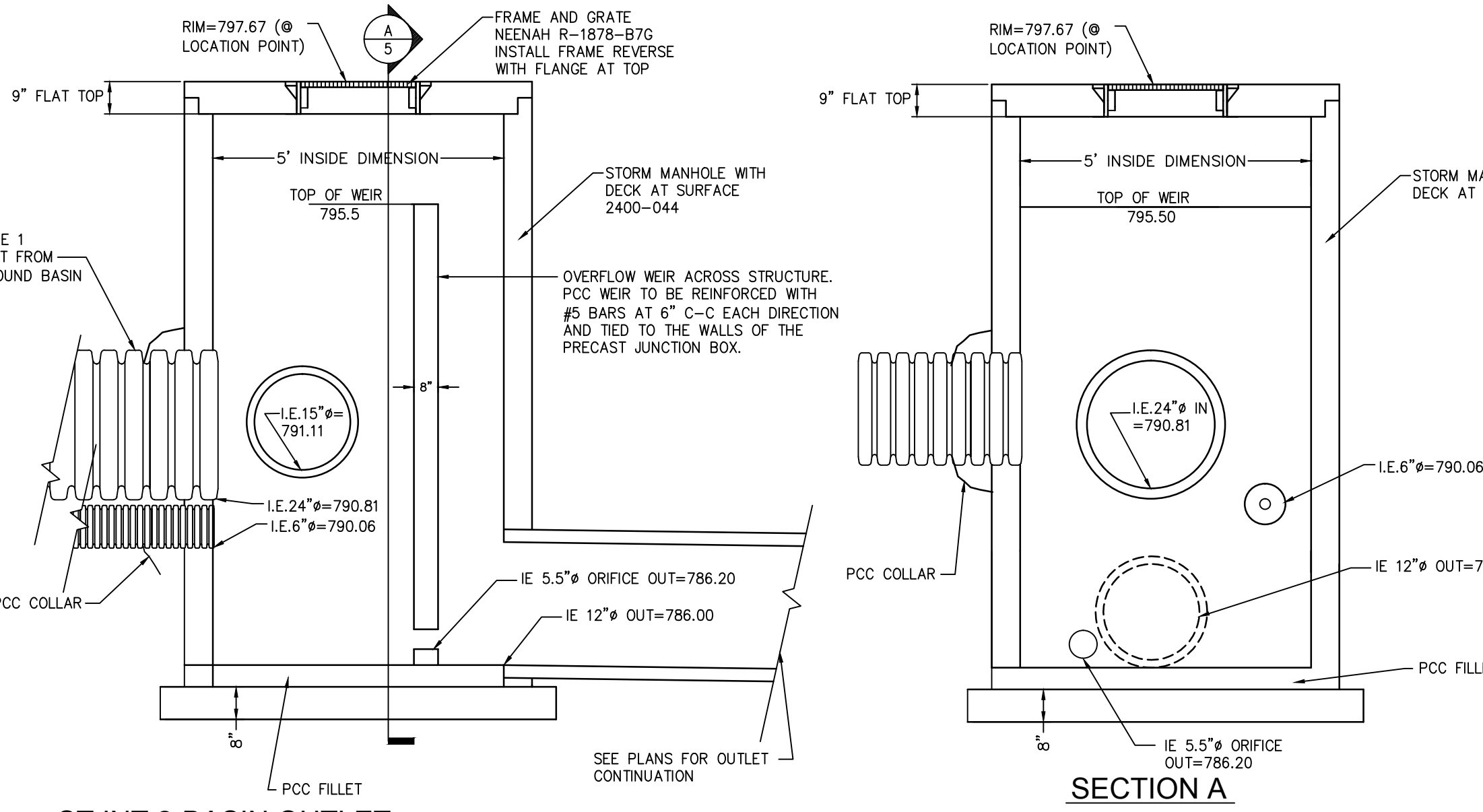
- PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE"
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTAL TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

NOTE: THIS DETAIL FOR FILL MATERIALS AND REFERENCE ONLY. SEE UNDERGROUND BASIN CROSS SECTION THIS SHEET FOR ELEVATIONS AND DIMENSIONS.



ST.INT.2-BASIN OUTLET

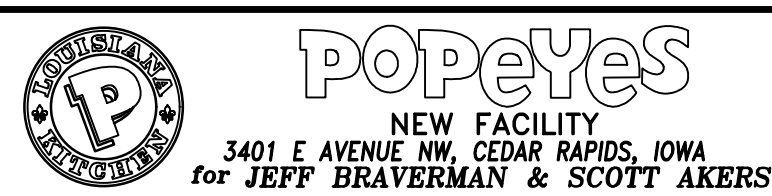
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SITE CONSTRUCTION NOTES AND DETAILS

SHEET

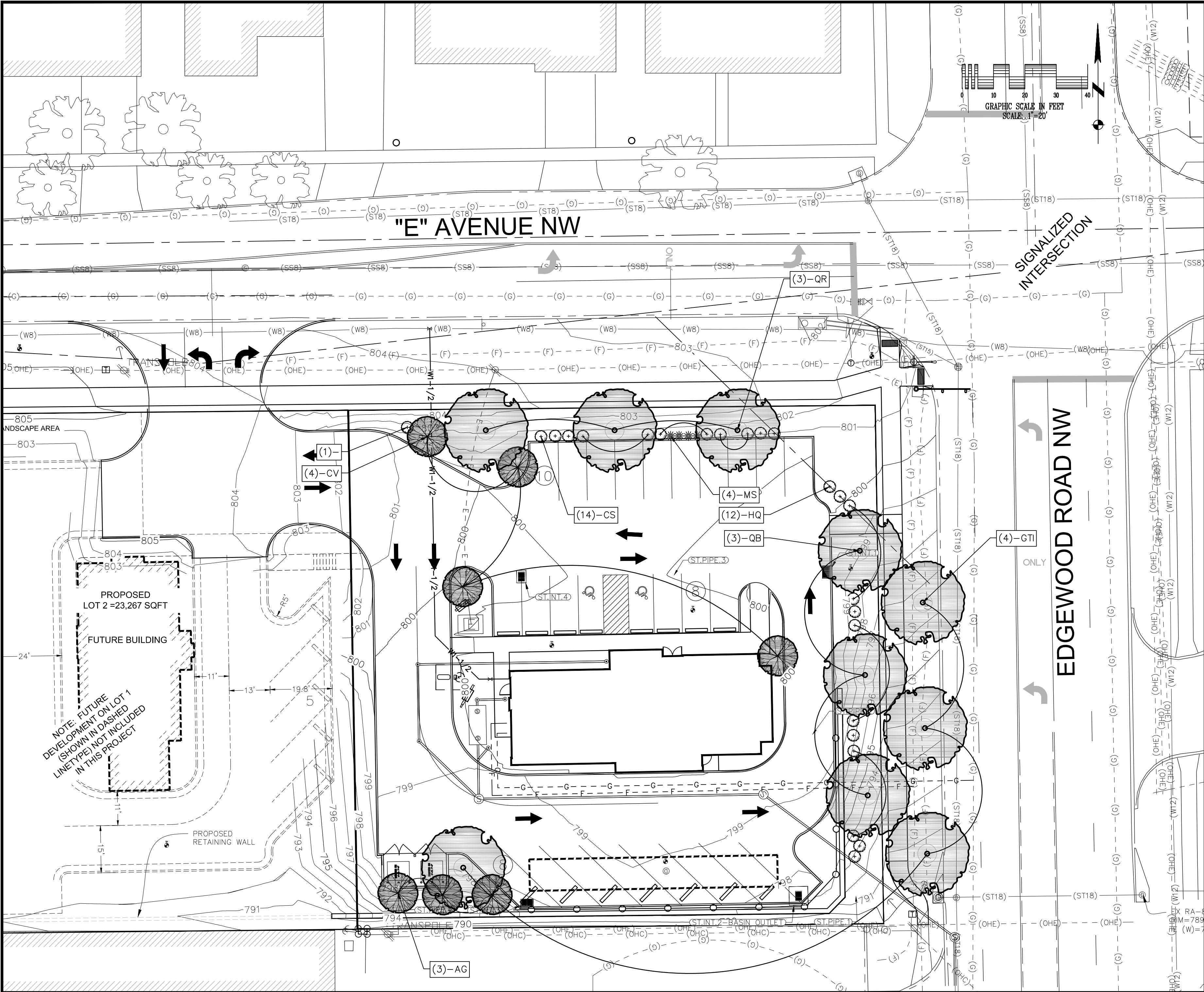
C9.0

PROJECT NO: 10286-1





SITE TRAFFIC CONTROL PLAN		SHEET C10.0
PROJECT NO: 10286		



PLANTING REQUIREMENTS (PROPOSED LOT1)

ZONING: EXISTING: C-2
PROPOSED: C-2
ADJACENT ZONING: C-2
NORTH: R-2 (E AVENUE NW EXISTING 40' HALF ROW MAJOR ARTERIAL)
SOUTH: C-3
WEST: C-2
EAST: C-2 (EDGEWOOD RD NW EXISTING 50' HALF ROW MAJOR ARTERIAL)

STREET TYPE CLASSIFICATION & REQUIRED CLEAR ZONE

STREET EDGEWOOD RD NW: ARTERIAL = 10' CLEAR ZONE
STREET E AVENUE NW: ARTERIAL = 10' CLEAR ZONE

PARKING TREES

PARKING SPACES (1 TREE/12 STALLS): 26/12 = 2.16
2 TREES REQUIRED
2 TREES PROVIDED

TREE MITIGATION REQUIREMENTS:

TREE MITIGATION

EXISTING TREES TO BE REMOVED:

DBH COUNT REQ. REPLACEMENT
5-15 06 @ 1:1 = 6

6 TREES REQUIRED
6 TREES PROVIDED

(BOTH UNDERSTORY AND OVERSTORY SHADE TREES UTILIZED DUE TO SITE CONSTRAINTS AND FOR VARIETY.)

EDGEWOOD RD NW - FRONT YARD 15'

RIGHT-OF-WAY LANDSCAPING

1 TREE/ 40 LF (LESS DRIVES & ACCESS SIGHT DISTANCE Δ)
LENGTH OF FRONTAGE: 165 LF = 46 LF = 119 LF
TREES REQUIRED: 119/40 = 2.9
3 TREES REQUIRED
3 TREES PROVIDED

STREET FRONTAGE LANDSCAPE AREA (15' WIDTH)

1 TREE/ 50 LF (LESS DRIVES & ACCESS SIGHT DISTANCE Δ)
TOTAL AREA: 136 LF x 15 = 2040 SF
TREES REQUIRED: 136/50 = 2.7
3 TREES REQUIRED
3 TREES PROVIDED

SHRUB SCREENING

SHRUBS IN NON-PRKG 166 LF - 30 LF = 136 (15) = 2040 SF
AREAS @ 6/1,000 2040 SF / 1,000 (6) = 12.24
12 SHRUBS REQUIRED
12 SHRUBS PROVIDED

E AVENUE SW - SIDE YARD 10'

RIGHT-OF-WAY LANDSCAPING

1 TREE/ 40 LF (LESS DRIVES & ACCESS SIGHT DISTANCE Δ)
LENGTH OF FRONTAGE: 165 LF = 46 LF = 119 LF
TREES REQUIRED: 119/40 = 2.9
3 TREES REQUIRED
0 TREES PROVIDED: TREES EXCLUDED
BECAUSE EXISTING OVERHEAD ELECTRIC
LINES ARE LOW

STREET FRONTAGE LANDSCAPE AREA (10' WIDTH)

1 TREE/ 50 LF (LESS DRIVES & ACCESS SIGHT DISTANCE Δ)
TOTAL AREA: 135 LF x 10 = 1350 SF
TREES REQUIRED: 135/50 = 2.7
3 TREES REQUIRED
3 TREES PROVIDED

SHRUB SCREENING

SHRUBS TO SCREEN 91 LF. x 0.67 = 60.97 LF
2/3 OF PARKING LOT 61 LF. / 4' = 15.25
(4' AVG SHRUB WIDTH)
15 TOTAL SHRUBS REQUIRED
11 SHRUBS PROVIDED
4 GRASSES/WILDFLOWERS PROVIDED

SHRUBS IN NON-PRKG 135 LF - 91 LF = 44 (10) = 440 SF
AREAS @ 6/1,000 440 SF / 1,000 (6) = .4
1 SHRUBS REQUIRED
1 SHRUBS PROVIDED

GENERAL LANDSCAPE NOTES:

- CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO EXCAVATION. BEFORE COMMENCEMENT OF ANY WORK, CONTACT IOWA ONE CALL (1-800-292-8898) AT LEAST 48 HOURS PRIOR TO DIGGING. REPAIR DAMAGE TO UTILITIES AND STRUCTURES IMMEDIATELY.
- PRIOR TO PLANT MATERIAL INSTALLATION, THE LANDSCAPE OR OWNER'S REPRESENTATIVE SHALL APPROVE PLANT LOCATIONS. FIELD ADJUSTMENTS OF PROPOSED PLANT LOCATIONS MAY BE REQUIRED TO MINIMIZE POTENTIAL INTERFERENCE WITH EXISTING UTILITIES, TO MINIMIZE HAZARDS TO PLANT GROWTH AND TO IMPROVE MAINTENANCE CONDITIONS.
- PRIOR TO INSTALLATION, ALL TREE PLANTING LOCATIONS SHALL BE FLAGGED AND PLANTING BEDS SHALL BE DELINEATED FOR APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. CONTACT THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE ONE WEEK PRIOR TO ANTICIPATED PLANT MATERIAL INSTALLATION DATE FOR LAYOUT APPROVAL.
- ALL PLANT MATERIAL SHALL AT LEAST MEET MINIMUM REQUIREMENTS SHOWN IN THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1-LATEST EDITION).
- PLANT QUANTITIES ARE FOR CONTRACTOR'S CONVENIENCE. DRAWINGS SHALL PREVAIL WHERE DISCREPANCIES OCCUR.
- NO PLANT MATERIAL SHALL BE SUBSTITUTED WITHOUT THE AUTHORIZATION OF THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- BED PREPARATION AND MULCHING NOTES:
7. IMPORTED TOPSOIL, IF REQUIRED, SHALL BE:
FERTILE, FRIABLE, NATURAL TOPSOIL, WITH A CLAY CONTENT NOT EXCEEDING 30% AND ORGANIC MATTER CONTENT NOT LESS THAN 5% FREE FROM LUMPS, COARSE SANDS, STONES, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL, WITH ACIDITY RANGE OF BETWEEN Ph 6.0 and 6.8.
- PLANTING SOIL:
PLANTING SOIL (i.e. BACKFILL AREAS AROUND ROOT BALLS AS SHOWN ON TREE/SHRUB INSTALLATION DETAIL) SHALL BE AMENDED: THOROUGHLY MIX 4 PARTS TOPSOIL, 1 PART COMPOST, 1 PART SAND.
TOPSOIL SHALL BE AS SPECIFIED WITHIN THE NOTE ABOVE.
COMPOST SHALL BE FINELY SCREENED GRADED TO PASS SIEVE AS FOLLOWS:
-MINIMUM OF 85% BEING 1/4" OR SMALLER (DRY BASIS RESULT).
-MINIMUM OF 70% BEING 5/32" OR SMALLER (DRY BASIS RESULT).
-WITH CLUMPS OR PARTICLES 3/4" DIAMETER OR GREATER.
SAND SHALL BE C33 WASHED CONCRETE SAND, OR APPROVED EQUAL.
- UNLESS OTHERWISE STATED, ALL GRASS/PERENNIAL MASSINGS ARE TO BE EVENLY SPACED IN TRIANGULAR PATTERN ARRANGEMENT.
- PRIOR TO MULCHING ALL PLANTING BED AREAS, APPLY COMMERCIAL GRADE PRE-EMERGENT HERBICIDE (GREEN OR APPROVED EQUAL), PER MANUFACTURER'S DIRECTIONS, TO ALL PLANTING BEDS.
- PROVIDE A MINIMUM 3" DEPTH OF SHREDDED HARDWOOD MULCH IN ALL TREE PLANTING BEDS.
- PROVIDE 2" DEPTH OF SHREDDED HARDWOOD MULCH IN ALL SHRUB/ORNAMENTAL GRASS/PERENNIAL BEDS.
- PROVIDE ALL TREES WITH A MINIMUM 3" DEPTH OF SHREDDED HARDWOOD MULCH. MULCH RINGS FOR TREES SHALL BE A MINIMUM SIX FOOT (6') DIAMETER AND CONTAIN SPADE EDGING AT MULCH RING EDGE.
- PROVIDE AND MAINTAIN POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION AND INSTALLATION. DO NOT ALLOW ADDITION OF TOPSOIL, PLANTING SOIL OR MULCH TO DETRIMENT POSITIVE DRAINAGE OR TO CREATE AREA OF LOCALIZED PONDING.
- NURSERY TAGS SHALL BE LEFT ON PLANT MATERIAL UNTIL LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE HAS COMPLETED THE INITIAL ACCEPTANCE.
- CONTAINER GROWN STOCK SHALL HAVE THE CONTAINER REMOVED AND THE ROOT BALL CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
- ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT TIME OF PLANTING.
- AS NEEDED, STAKE ALL NEWLY PLANTED TREES RELATIVE TO WIND EXPOSURE. ALL PLANTS SHALL BE SET PLUMB TO GROUND AND FACED FOR BEST APPEARANCE. AS NECESSARY, PRUNE DEAD BRANCHES OR THOSE THAT COMPROMISE APPEARANCE AND STRUCTURE TO A MAX OF 1/4 THE PLANT.
- CONTRACTOR SHALL WATER AND MAINTAIN ALL SEEDED AREAS AS WELL AS ALL PLANTS UNTIL GROUND FREEZES. MAINTENANCE INCLUDES WEEDING, MULCHING, AND OTHER NECESSARY RELATED OPERATIONS UNTIL INITIAL ACCEPTANCE. INITIAL ACCEPTANCE IS CONSIDERED TO BE THE DATE AT WHICH PLANTING AND MULCHING, ETC., PER LANDSCAPE PLAN, HAS BEEN COMPLETED AND APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN VIGOROUS GROWING CONDITIONS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INITIAL ACCEPTANCE.
- REPLACE ALL PLANT MATERIAL UP TO ONE YEAR OF INITIAL ACCEPTANCE, IN ACCORDANCE WITH LANDSCAPE PLANS. ALL PLANTS THAT ARE DEAD OR IN AN UNHEALTHY OR UNSIGHTLY STATE ARE REQUIRED TO BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL HAVE FULL SURFACE RESTORATION IMPLEMENTED BY MEANS OF TURF GRASS LAWN SEED AND/OR SOD, CONTRACTOR TO VERIFY/COORDINATE WITH OWNER UNLESS NOTED OTHERWISE.
- ALL SEEDING APPLICATION NOTES ARE LISTED IN SOD/SEED APPLICATION NOTES. CONTRACTOR SHALL FOLLOW SEED MANUFACTURER'S RECOMMENDED SPECIFICATIONS FOR PRODUCT INFORMATION & INSTALLATION. FOR ALL OTHER LANDSCAPING WORK NOT ADDRESSED VIA MANUFACTURER'S SPECIFICATIONS, CONTRACTOR SHALL FOLLOW THE "CEDAR RAPIDS METROPOLITAN AREA STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS" SECTIONS '02900 - SEEDING' & '02910 - PLANTS' FOR ALL SURFACE RESTORATION AND PLANTING PRACTICES. FOR ANY DISCREPANCIES THAT MAY ARISE, THE PLAN AND NOTES ON THIS SHEET SHALL SUPERCEDE THE METROPOLITAN SPECIFICATIONS.
- ALL TREES TO BE PLACED WITHIN PARKING LOT ISLANDS ARE TO STRICTLY FOLLOW THE CEDAR RAPIDS METROPOLITAN AREA STANDARD DETAIL '2910-010 STANDARD PLANTING PIT'. FOR SPECIAL USE SITUATIONS WHEN PLACING TREES WITHIN A PARKING LOT WITHOUT A PROTECTIVE ISLAND, THE DETAIL '2910-015 SPECIAL USE PLANTING PIT' SHALL BE USED. SEE CITY DETAIL THIS SHEET.
- NURSERY SOURCE FOR LANDSCAPE PLANTS SHOWN HEREON SHALL BE WITHIN A 500 MILE RADIUS OF CEDAR RAPIDS, IOWA AND GROWN IN A CLIMATE ZONE OF 5A OR COLDER.
- PROVIDE ALUMINUM EDGING BETWEEN ALL MULCHED BEDS AND LAWN AREAS (SOD AND/OR SEED). ALUMINUM EDGING SHALL BE PERMALOC CLEANLINE 3/16" x 5.5" WITH MILL FINISH - NATURAL ALUMINUM, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS. PRODUCT INFORMATION SEE: www.permaloc.com
- PROVIDE IRRIGATION FOR PLANTING BEDS ADJACENT TO BUILDING AND MULCHED BEDS ALONG PERIMETER OF SITE, REFER TO IRRIGATION NOTES, THIS SHEET, FOR MORE INFORMATION. CONTRACTOR MUST HAVE A MINIMUM OF FIVE YEARS EXPERIENCE WITH PROJECTS OF SIMILAR SIZE & TYPE.

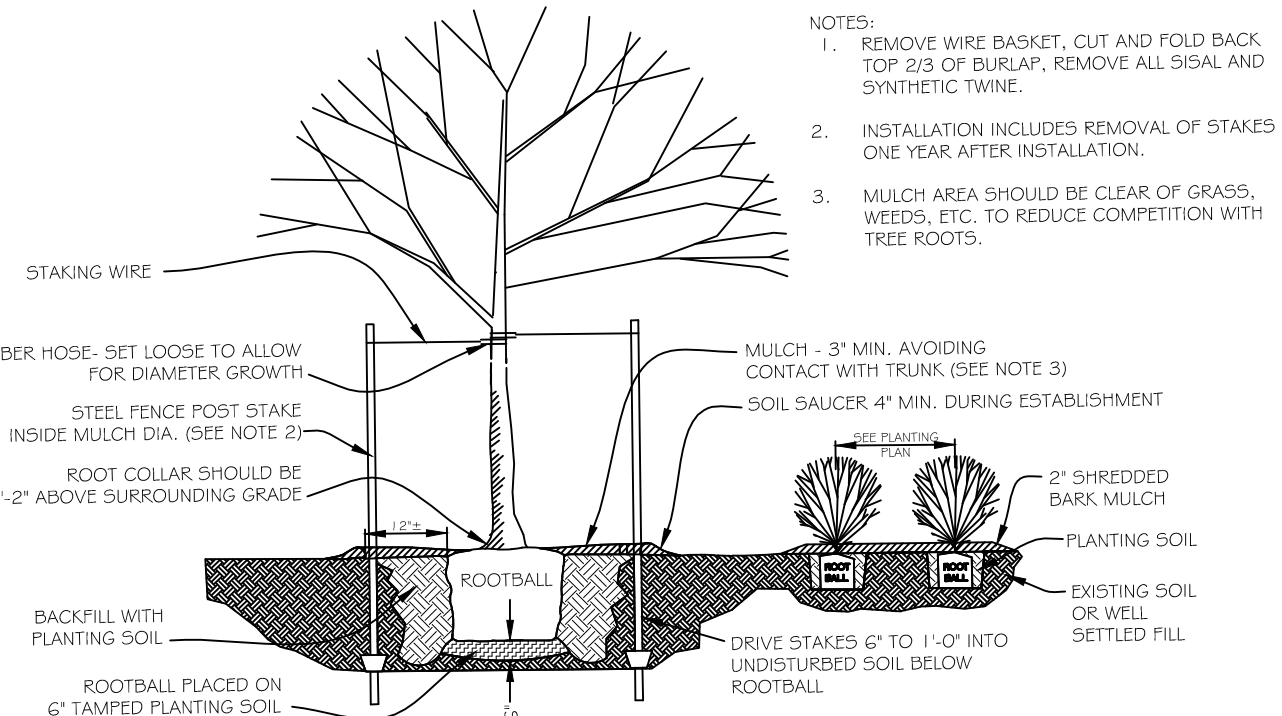
SEED/SOD APPLICATION NOTES

- IF TURF GRASS LAWN SEED ALTERNATE IS USED IN LIEU OF SOD, ALL SEEDING APPLICATION AREAS SHALL BE PROVIDED BY UNITED SEEDS INC. OR APPROVED EQUAL. CONTACT INFORMATION IS LISTED BELOW.
- ALL TURF GRASS LAWN AREAS, WHETHER SODDED OR SEEDED, UNLESS NOTED OTHERWISE, ARE TO BE PLANTED AND INSTALLED AS PER THE "TECHNICAL BULLETIN" FOR "SOD GROWER II KENTUCKY BLUEGRASS BLEND" PROVIDED BY UNITED SEEDS, OR APPROVED EQUAL. TECHNICAL BULLETIN FOR "SOD GROWER II KENTUCKY BLUEGRASS BLEND" CAN BE FOUND ON THE UNITED SEEDS WEBSITE: www.unitedseeds.com
- ALL TURF GRASS SOD TO BE OF THE SAME PERFORMANCE, QUALITY AND SPECIES TYPE OF THE "SOD GROWER II KENTUCKY BLUEGRASS BLEND" PROVIDED BY UNITED SEEDS, OR APPROVED EQUAL. BLUEGRASS VARIETIES SHALL INCLUDE: "CONCERTO", "NU BLUE", "BEYOND", AND "EVEREST".
- NW STORM WATER DETENTION BASIN TO BE PLANTED/INSTALLED WITH SOD ON THE SIDE SLOPES AND SEEDED ON THE 20' WIDE BASIN BOTTOM (SEE PLAN DETAIL INFORMATION ON SHEETS C5.1 & C8.1).
SODDED SIDE SLOPES SHALL BE "SOD GROWER II" AS LISTED IN NOTE 3 ABOVE.
SEED MIX IN THE 20' BASIN BOTTOM SHALL BE INSTALLED PER THE "TECHNICAL BULLETIN" FOR "SUPER TURF I LS" (TURF TYPE TALL FESCUE & PERENNIAL RYEGRASS WITH NO BLUEGRASS) PROVIDED BY UNITED SEEDS, OR APPROVED EQUAL. TECHNICAL BULLETIN CAN BE FOUND ON UNITED SEEDS WEBSITE: www.unitedseeds.com
CONTACT INFO:
United Seeds Inc.
1800 Dixon Ave, Suite A
Des Moines, IA 50316
Ph: 1-800-365-6674
Contact Person: Mark Ackerman
Email: mackerman@unitedseeds.com
Web: www.unitedseeds.com

PLANTING LEGEND

- PROPOSED DECIDUOUS SHADE TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUB
- PROPOSED PERENNIAL/GRASS
- EXISTING DECIDUOUS SHADE TREE
- EXISTING SHRUB
- EXISTING CONIFEROUS TREE
- EXISTING SHRUB

ID	QTY	BOTANICAL/COMMON NAME	MIN. SIZE	ROOT	SPACING	NOTES
OVERSTORY / SHADE TREES						
GT	4	Gleditsia triacanthos VAR 'nermis' "Truesdale" Honeylocust	2 1/2" DBH	BB	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN
QB	3	Quercus bicolor Swamp White Oak	2 1/2" DBH	BB	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN
QR	3	Quercus rubra Northern Red Oak	2 1/2" DBH	BB	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN
ORNAMENTAL & UNDERSTORY TREES						
AG	3	Amelanchier X grandiflora Grandiflora Serviceberry	1-1/2" DBH	CONTAINER	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN
CV	4	Crataegus viridis "Winter King" Winter King Green Hawthorn	1-1/2" DBH	CONTAINER	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN
SHRUBS						
CS	14	Cornus sericea "Cardinal" Cardinal Red-twig Dogwood	3 GAL.	CONTAINER	36" OC	NURSERY MATCHED, QUALITY SPECIMEN
HQ	12	Hydrangea quercifolia "Snowflake" Snowflake Oak-leaf Hydrangea	3 GAL.	CONTAINER	36" OC	NURSERY MATCHED, QUALITY SPECIMEN
PERENNIALS / ORNAMENTAL AND NATIVE GRASSES						
MS	4	Miscanthus sinensis "Morning Light" MORNING LIGHT MISCANTHUS	1 GAL.	CONTAINER	SEE PLAN	NURSERY MATCHED, QUALITY SPECIMEN



TREE / SHRUB INSTALLATION DETAIL
NOT TO SCALE

DRAWN BY: DAS					
CHECKED BY: BWJ					
APPROVED BY:					
DATE: 8/10/2015					
FIELD BOOK: XXX	NO.	REVISION DESCRIPTION	APPROVED	DATE	

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LANDSCAPE PLAN	SHEET L1.0
PROJECT NO:10286-1	